



ADVANCED  
NANOTECHNOLOGY  
LIMITED ACN 079 845 855

# PROSPECTUS

UNDERWRITER  
KTM Capital Pty Limited  
ACN 086 281 950

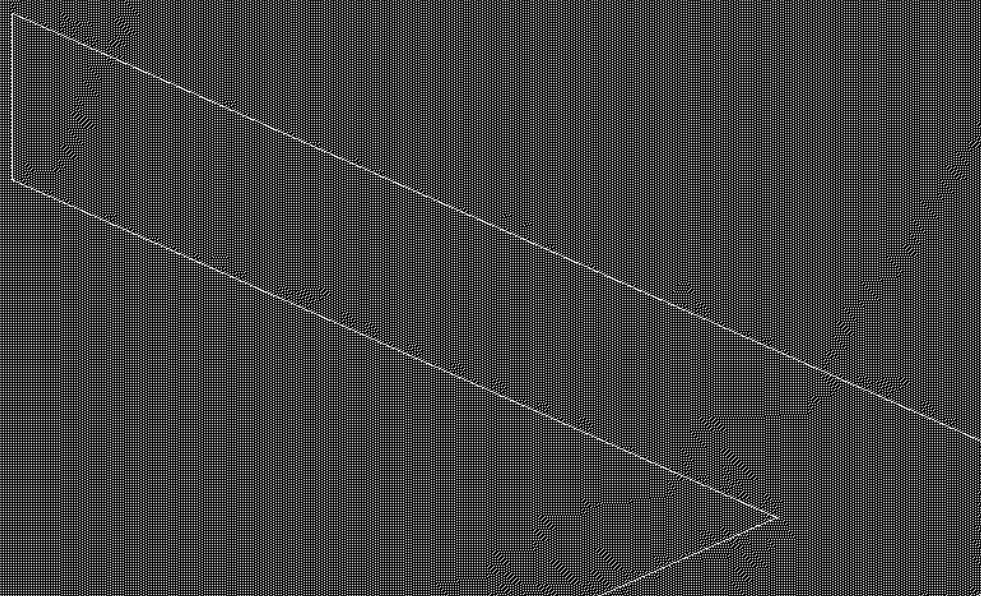
This Prospectus is dated 10 January 2005 and was lodged with the ASIC on 10 January 2005. No responsibility for the contents of this Prospectus is taken by the ASIC, ASX or their respective officers. This Prospectus does not constitute an offer in any place in which, or to any person to whom, it would not be lawful to make such an offer.

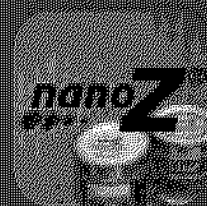
The distribution of this Prospectus in jurisdictions outside Australia may be restricted by law and persons who come into possession of this Prospectus should seek advice on and observe any such restrictions. Any failure to comply with such restrictions may constitute a violation of applicable securities laws.

Before deciding to invest in Advanced Nanotechnology Limited, potential investors should read the entire Prospectus and in particular consider the risk factors that could affect the financial performance of Advanced Nanotechnology Limited. The price of shares may rise or fall according to a number of factors. You should carefully consider these risks in light of your personal circumstances (including financial and taxation issues) and seek professional advice from your accountant, stockbroker, lawyer or other professional adviser before deciding whether to invest.

No securities will be issued or allotted on the basis of this Prospectus after its expiry date, being the date 13 months after the date of this Prospectus. A number of terms and abbreviations used in this Prospectus have defined meanings which appear in the Glossary of Terms. All financial amounts shown in this Prospectus are expressed in Australian dollars unless otherwise stated.

This Prospectus contains various images of products incorporating Advanced Nanotechnology Limited's products. The use of these images is not an endorsement of Advanced Nanotechnology Limited by the owners of the products or brands.

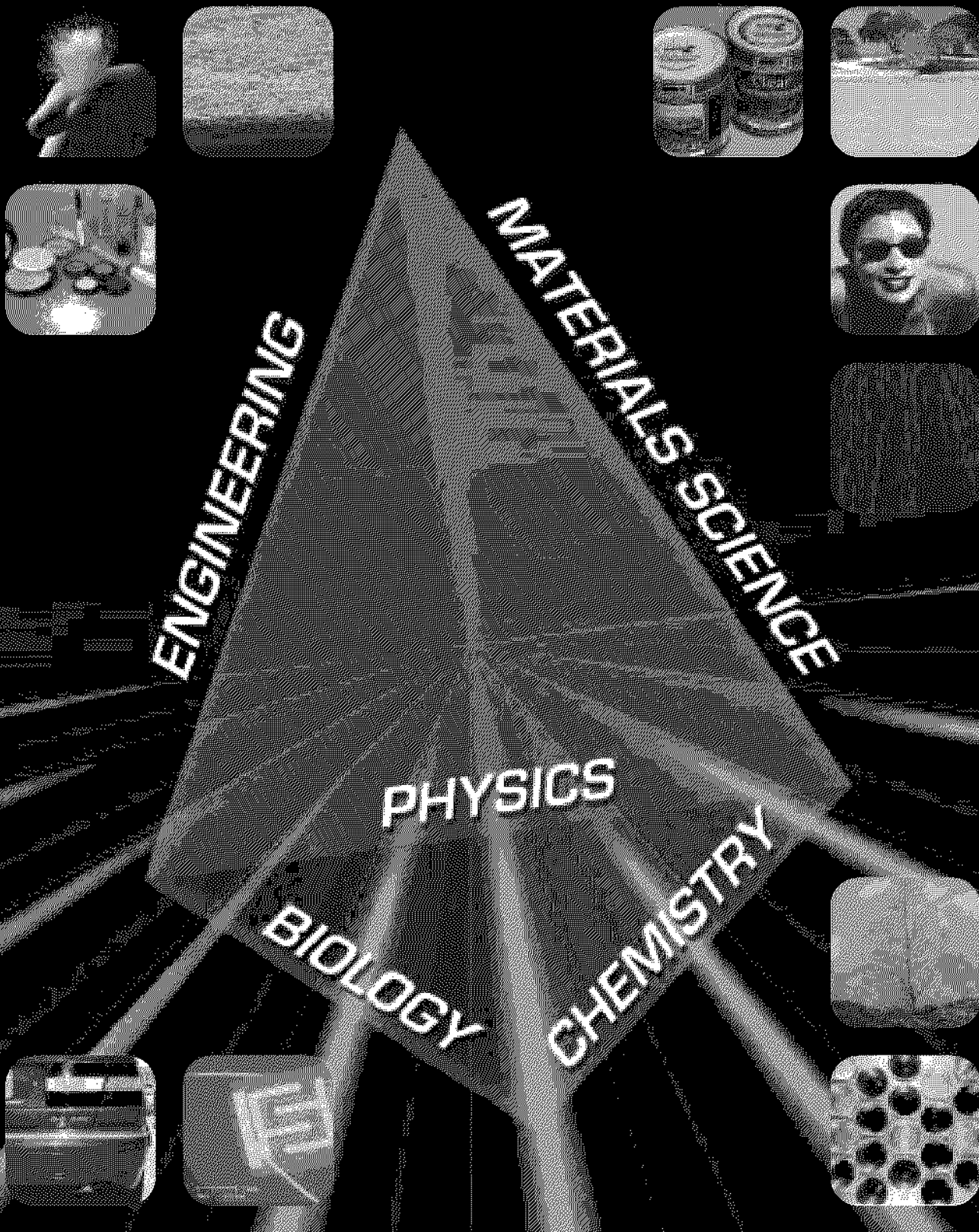




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# NANOTECHNOLOGY APPLICATIONS



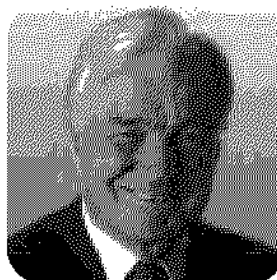
**NANOMATERIALS**

**NANOELECTRONICS**

**NANOBIOTECHNOLOGY**

- Stain Resistant Textiles
- Ceramics
- Sunscreen
- Catalysts
- Transparent UV Coatings
- Fuel Cells
- Conductive Coatings
- Nanocomposites
- Pharmaceuticals
- Cosmeceuticals

## LETTER FROM THE CHAIRMAN



Dear Investor

On behalf of my fellow Directors, I have great pleasure in presenting you with the opportunity to participate in the ownership and growth potential of Advanced Nanotechnology Limited ("Advanced Nano" or "the Company"). Advanced Nano is one of the first Australian companies to operate in the nanotechnology sector and focuses on the production of nanomaterials.

Nanotechnology is the creation and use of materials, devices and systems that exploit novel properties arising from the structure and function of matter in the nanometre range and is an emerging industry sector. Nanotechnology may be applied in a wide range of areas including materials, electronics, manufacturing, computing and biotechnology. Nanomaterials are materials optimised at the nanoscale (one billionth of a metre) and nanopowders consist of particles with nanometre dimensions. Products produced from nanopowders exhibit unique properties, with a wide range of potentially high value commercial applications.

Advanced Nano has built on research undertaken at the University of Western Australia ("UWA") which developed a patent protected mechanochemical process ("MCP™") nanopowder manufacturing technology. Advanced Nano believes that the MCP™ technology enables the production of high quality nanopowders at what is expected to be a relatively low cost base. Over the past five years approximately \$18 million has been spent developing and commercialising the MCP™ technology and related applications. In addition to the MCP™ technology, Advanced Nano believes it has a strong intellectual property position covering wide aspects of nanomaterials applications.

Advanced Nano commenced commercial production of nanopowder products in 2002 and from a small base has achieved promising growth in revenues since that time. Advanced Nano currently sells four products into domestic and international markets in the areas of sunscreens, cosmetics, industrial coatings and fuel catalysts. Advanced Nano has also reached proof of concept stage in a number of other applications. The Company believes its nanopowders have broad application and the potential to penetrate the emerging global nanotechnology markets in areas such as cosmetics, industrial coatings, pharmaceuticals, health care, catalysts and advanced ceramics.

Under this Prospectus, Advanced Nano is offering 45 million Shares for subscription at an issue price of \$0.20 to raise \$9 million. Application will be made to the ASX for the Shares to be listed on the ASX. Upon listing on the ASX, Advanced Nano will have a market capitalisation of approximately \$33 million at the Offer Price. On successful completion of the float (and after payment of the issue costs) the Company will have no significant debt, and cash resources of approximately \$9.5 million. Advanced Nano believes that these cash resources are sufficient to fund the Company's current plans as described in this Prospectus. However, should new opportunities, unexpected costs, or higher levels of growth arise, it may be necessary to raise further funds to take advantage of such opportunities.

Details of the Offer, and the Company's operations, risks and financial position, are set out in this Prospectus. I encourage you to read it carefully. On behalf of the Board of Advanced Nano, I look forward to welcoming you as a shareholder in the Company.

Yours sincerely

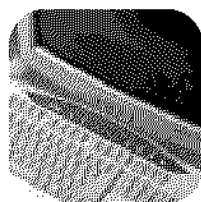
Harold Clough AO, OBE  
Non-Executive Chairman



Section One

# KEY DATES AND OFFER STATISTICS

*Image above: Alumina Platelets*



## KEY DATES

Application list opens (following the ASIC exposure period)	18 January 2005
Application list closes	4 February 2005
Expected date of dispatch of holding statements	14 February 2005
Expected date of quotation of Shares on the ASX	17 February 2005

## OFFER STATISTICS

Offer Price	\$0.20
Number of Shares on issue following the Offer (note 1)	165,271,202
Number of Shares being offered by this Prospectus	45,000,000
Gross proceeds from issue available to Advanced Nano	\$9,000,000
Market Capitalisation at the Offer Price	\$33,054,240
Net assets per Share (note 2)	11.5 cents
Net tangible assets per Share (note 2)	7.6 cents

Notes:

1. For details of Capital Structure refer Section 11.1.

2. Based on the Pro-forma Consolidated Statement of Financial Position (refer Section 9).



Section Two

# INVESTMENT HIGHLIGHTS

*Image above: Alusion® Platelets*



# INVESTMENT HIGHLIGHTS

## 2.1 THE NANOTECHNOLOGY SECTOR – UNIQUE AND EMERGING INDUSTRY SECTOR

Nanotechnology is the creation and use of materials, devices and systems that exploit novel properties arising from the structure and function of matter in the nanometre range. Nanotechnology may be broadly divided into three areas of application: nanomaterials/particles; nanoelectronics/photonics; and nanobiotechnology. Of these three areas, nanomaterial products are at the most advanced stage of commercial development. Products produced from nanopowders exhibit unique properties, with a wide range of potentially high value commercial applications in what are expected to be rapidly expanding markets. Markets for nanomaterials with special properties and processes have been forecast by the United States National Science Foundation to reach US\$240 billion per annum by 2011-2015. Many governments around the world are investing in the future of nanotechnology. The United States Government alone has committed some US\$3.7 billion towards nanotechnology research and is leading the world in the nanotechnology sector.

## 2.2 A LEADING AUSTRALIAN NANOTECHNOLOGY COMPANY

Advanced Nano is one of the first Australian companies to operate in the nanotechnology sector. The Company was formed in 1997 (originally named Advanced Powder Technology Pty Ltd) to commercialise the patented MCP™ nanopowder technology developed by UWA. In 2000 Advanced Nano and Samsung Corning Co. Ltd., of Korea ("Samsung Corning") formed Advanced Nano Technologies Pty Ltd ("ANT"), a 50:50 owned company, to commercially develop the MCP™ nanopowder manufacturing technology. Following successful scale up of the MCP™ technology, Advanced Nano commenced commercial production in 2002. ANT and Samsung Corning have executed several agreements to provide for ANT to buy-back Samsung Corning's shares in ANT and to establish the co-ownership of ANT's intellectual property relating to the MCP™ nanopowder manufacturing process. These agreements, which are further discussed in Section 11.4.4, allow Advanced Nano and Samsung Corning to co-own the MCP™ nanopowder manufacturing intellectual property while independently developing and commercialising product applications of MCP™ nanopowders.

In parallel with the development of the MCP™ nanopowder manufacturing technology, Advanced Nano has developed its own product intellectual property for incorporating MCP™ nanopowders into value added intermediate forms and final products. The Company believes its nanopowders and nanopowder products have broad application and the potential to penetrate the emerging global nanotechnology markets in areas such as cosmetics, industrial coatings, pharmaceuticals, health care, catalysts and advanced ceramics. Advanced Nano currently sells four products into Australian and overseas markets and achieved sales to customers of \$863,000 in the 2004 financial year.

Advanced Nano aims to become a significant innovator and manufacturer of advanced nanomaterials and nanomaterials products. The Company intends to build on its core competencies and deliver innovative nanomaterials products in forms that enhance the value of customers' products.

## 2.3 BROAD BASED PROPRIETARY TECHNOLOGY

The MCP™ technology enables the manufacture of dispersed nanoparticles that are used in, and provide the basis for, a growing range of nanotechnology based products. The MCP™ technology is differentiated from existing nanopowder production processes in that MCP™ nanopowders are formed by a solid-state reaction, which gives unique attributes required to achieve the enhanced physical, chemical and biological properties that many sectors of the nanomaterials industry seek.

Key advantages of the MCP™ technology includes small, discrete particles; narrow particle size distribution; particle size and shape control; and the use of standard industrial process equipment and chemicals. The Company has generated and expects to continue to generate a portfolio of intellectual property pertaining to a varied range of applications of nanotechnology.

#### 2.4 STRONG INTELLECTUAL PROPERTY POSITION

The MCP™ nanopowder manufacturing technology is protected by three international patents and one patent application which are all co-owned with Samsung Corning. Advanced Nano exclusively owns further intellectual property relating to the particular products it develops from MCP™ nanopowders. At the date of this Prospectus, two product application patents have been filed by Advanced Nano, and a further two patent applications are under preparation.

#### 2.5 RAPID COMMERCIALISATION STRATEGY

Advanced Nano began commercial production of nanopowder products in 2002 and from a small base has achieved promising growth in revenues since that time. The Company sells directly to Australian markets and has established a network of international distributors to provide a sales presence in key geographic regions.

Advanced Nano's commercialisation strategy is focused on achieving early revenues by identifying high value, short time-to-market products which are expected to experience strong sustainable growth and where MCP™ nanopowders have a clear competitive advantage. In the larger, more difficult to penetrate markets, the Company is focussing its attention on the formation of strategic alliances with key partners.

#### 2.6 MULTIPLE PRODUCT APPLICATIONS IN SIGNIFICANT GLOBAL MARKETS

Advanced Nano has launched three branded products using its nanomaterial technologies:



**ZinClear®** – transparent dispersions of zinc oxide nanoparticles for use in sunscreen applications. Benefits include low irritant and effective broad-spectrum UV protection and, to the Company's knowledge for the first time, a transparent SPF 30+ sunscreen containing only zinc oxide as the UV absorber.



**Alusion®** – platelets of alumina used in cosmetics to create translucent soft focus effects to hide the appearance of fine lines and wrinkles. Based on market feedback received, the Company believes that the enhanced adhesion and feel of Alusion® powder exceeds that of the finest talcs and gives cosmetic formulators a superior final product.



**NanoZ®** – transparent zinc oxide nanoparticle dispersions for coatings to protect wood, textiles and plastics from the ravages of UV radiation.

The fourth product that Advanced Nano manufactures is a cerium oxide nanoparticle dispersion, a key component in **Envirox™**. Envirox™ is a product developed as a fuel borne catalyst by Cerulean International Limited ("Cerulean").

## 2.7 STRONG GROWTH PROSPECTS

Advanced Nano believes its broad based proprietary technology and multiple product applications will provide strong growth prospects. The Company continues to develop new markets for its existing products, and new nanopowders for its existing and new markets. Nanopowders of zinc oxide, ceria and alumina all have significant potential industrial applications. Advanced Nano has also identified a number of new applications that have the potential to penetrate the emerging global nanotechnology markets in areas such as pharmaceuticals, advanced ceramics and industrial catalysts.

## 2.8 EXPERIENCED MANAGEMENT

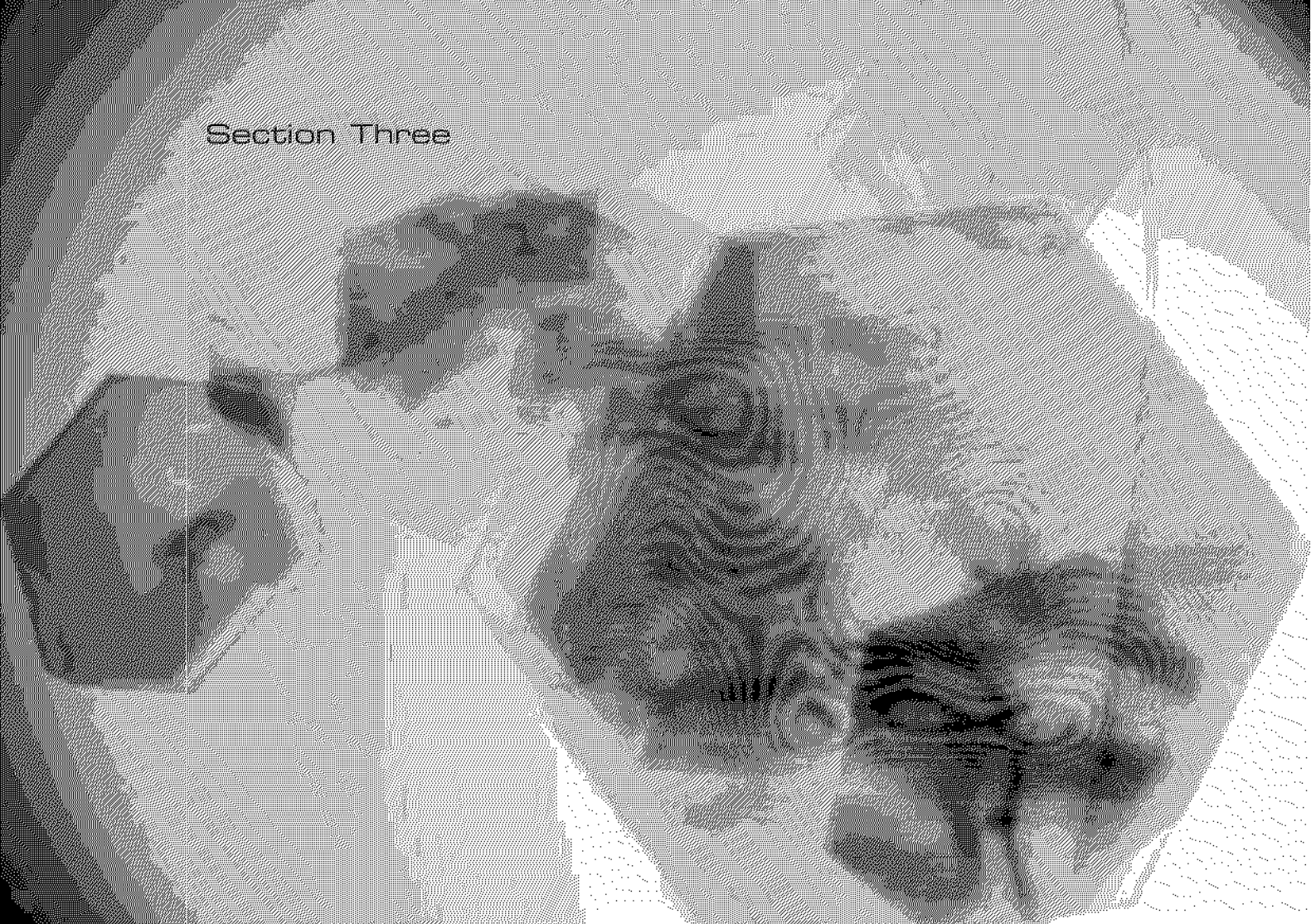
The management of Advanced Nano has experience in the development and commercialisation of nanotechnology related products. The management team includes key personnel involved in the development of the core technology from its inception at UWA, who have been joined by new team members with production and commercialisation experience.

## 2.9 STRONG FINANCIAL POSITION

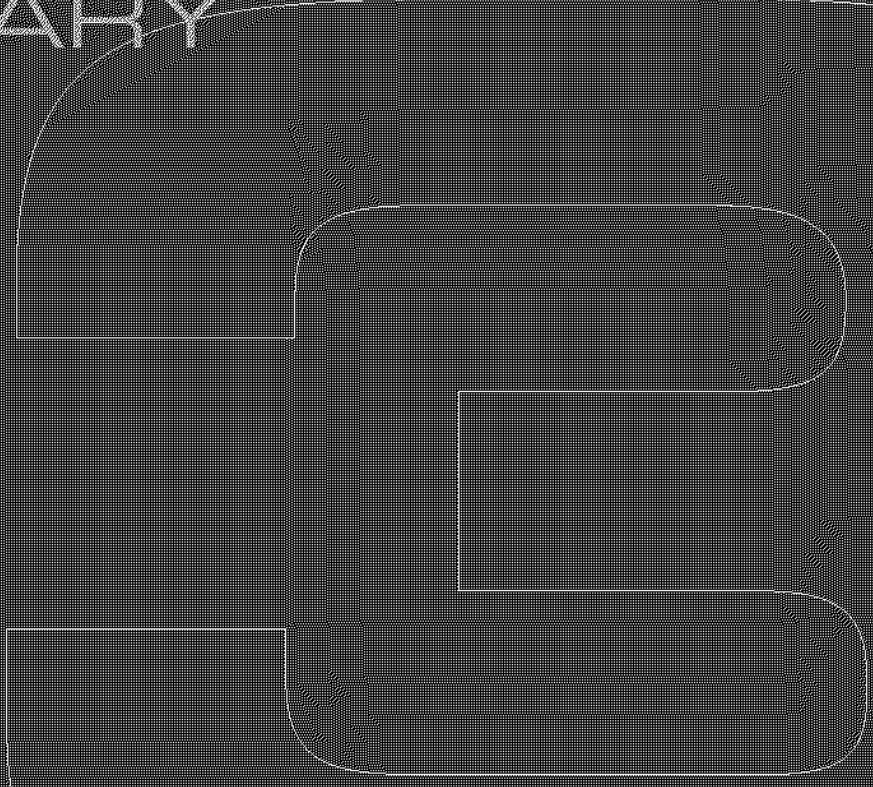
On successful completion of the Issue, Advanced Nano will have no significant debt, and cash resources of approximately \$9.5 million. Advanced Nano believes that these cash resources are sufficient to fund the Company's current plans as described in this Prospectus. However, should new opportunities, unexpected costs, or higher levels of growth arise, it may be necessary to raise further funds to take advantage of such opportunities.



Section Three



# INFORMATION SUMMARY



*Image above: Strontium Ferrite Nano-Platelets*

# INFORMATION SUMMARY

## 3.1 DESCRIPTION OF THE OFFER

This Prospectus offers a total of 45 million Shares at an offer price of \$0.20 per Share, payable in full on application. The Shares being offered under this Prospectus comprise an issue of new Shares by Advanced Nano. The new Shares to be issued by Advanced Nano under the Offer will rank equally in all respects with each other and the existing issued Shares of Advanced Nano after completion of the Offer. See Section 11.2 for details of the rights attaching to the Shares.

After the close of the Offer the issued capital of Advanced Nano will be 165,271,202 fully paid Shares. The Promoters of the Company will hold 56,713,912 Shares, or 34% of the total issued capital. Certain shareholders of Advanced Nano are likely to be subject to ASX imposed restrictions in relation to 72,943,499 million Shares, or 44% of the total issued capital. Details of the escrow arrangements to be entered into are set out in Section 11.12.

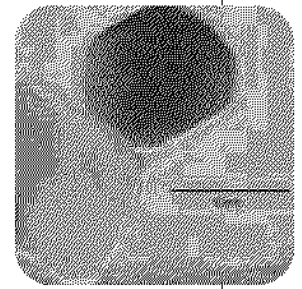
The Company will apply to the ASX for admission to the official list and to have all of its issued Shares listed for quotation on the ASX (other than the Shares classified as restricted securities by the ASX).

The Directors believe that, on completion of the Offer, Advanced Nano will have sufficient cash resources to fund the Company's current plans as described in this Prospectus. However, should new opportunities, unexpected costs, or higher levels of growth arise, it may be necessary to raise further funds to take advantage of such opportunities.

## 3.2 PURPOSES OF THE OFFER

The purposes of the Offer are as follows:

- to fund working capital requirements (\$2.1 million);
- to fund the expansion of Advanced Nano's nanopowder manufacturing facilities (\$2.8 million);
- to fund the development of new nanopowder products (\$1.8 million);
- to fund the expansion of Advanced Nano's business development activities in national and international markets (\$1.6 million);
- to pay the costs of the Offer (\$0.7 million); and
- to allow Advanced Nano easier access to the equity markets in order to fund future growth opportunities both through acquisitions and other business opportunities.



*Lattice image of cerium oxide nanoparticles*

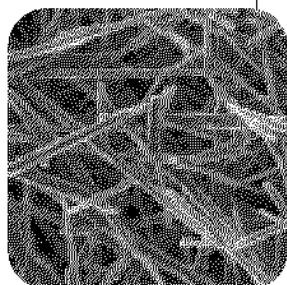
### 3.3 FINANCIAL INFORMATION

A summary of the Advanced Nano Pro-forma Consolidated Statement of Financial Performance for the years ending 30 June 2004 and 30 June 2003 is set out below. The assumptions underlying the summary Pro-forma Consolidated Statement of Financial Performance and the detailed Pro-forma Consolidated Statement of Financial Performance are set out in the Independent Accountant's Report (refer Section 9).

Year ended 30 June	2004	2003
	\$'000	\$'000
Revenue	1,116	662
Loss from ordinary activities before related income tax	4,089	4,414

A summary of the Advanced Nano Pro-forma Consolidated Statement of Financial Position is set out below, incorporating the Statement of Financial Position as at 30 June 2004 adjusted for the Offer. The assumptions underlying the summary Pro-forma Consolidated Statement of Financial Position and the detailed Pro-forma Consolidated Statement of Financial Position are set out in the Independent Accountant's Report (refer Section 9).

As at 30 June	2004
	\$'000
Current Assets	13,036
Non-Current Assets	7,337
Total Assets	20,373
Current Liabilities	1,094
Non-Current Liabilities	279
Total Liabilities	1,373
Shareholders Equity/Net Assets	19,000
Net Tangible Assets	12,529



Caria nano needles

### 3.4 ASSET BACKING

Based on the Pro-forma Consolidated Statement of Financial Position (annexed to the Independent Accountant's Report in Section 9), Advanced Nano's pro-forma net asset backing per Share and pro-forma net tangible asset backing per Share will be 11.5 cents and 7.6 cents respectively at the time of its ASX listing.



Advanced Nano reserves the right, in consultation with the Underwriter, to close the application list at any time after expiry of the Prospectus exposure period without prior notice. The Underwriter reserves the right to extend the Offer period without the consent of the Company subject to notifying the Company. The Company does not intend to accept Applications received after the Closing Date other than in satisfaction of the Underwriter's obligations to meet any shortfall in Applications.

### 3.9 ACCEPTANCE OF APPLICATIONS

The Company may accept or reject any Application, or accept an Application in respect of a number of Shares less than the number for which the Applicant applies. Acceptance of an Application by the Company creates a legally binding contract between the Applicant and the Company for the number of Shares for which the Application is accepted. Acceptance only takes place on allotment and issue of Shares.

Where an Application is rejected, the Application monies will be returned in full. If the number of Shares allotted to the Applicant is fewer than the number for which the Applicant applied, the surplus Application monies will be returned. Interest will not be paid on the returned Application monies.

The Company will issue the Shares that are the subject of successful Applications as soon as possible after the Closing Date and the grant of ASX permission for official quotation of the Shares unconditionally or on conditions acceptable to the Directors.

Pending the issue by the Company of the Shares offered by this Prospectus, the Company will deposit Application monies in a separate bank account and keep them there for so long as those Applications, or any part of them, are liable to be repaid in accordance with the Corporations Act and this Prospectus.

### 3.10 ASX LISTING

The Company will make an application to the ASX within seven days after the date of this Prospectus for the Company to be admitted to the official list of the ASX and for the official quotation of all Shares (other than the Shares classified as restricted securities by the ASX).

The fact that the ASX may admit Advanced Nano to the official list is not to be taken as an indication of the merits of the Company or the Shares. The ASX, its officers and employees take no responsibility for the contents of this Prospectus.

If granted, quotation of the Shares will commence as soon as is practicable after the issue of statements of holdings to Shareholders.

If permission for official quotation of the Shares is not granted or deemed granted within three months, none of the Shares offered by this Prospectus will be issued unless an exemption is granted by the ASIC permitting such issue. If no issue is made, all Application monies will be returned within the time prescribed by the Corporations Act. Interest will not be paid on any Application monies refunded.



### 3.11 CLEARING HOUSE ELECTRONIC SUBREGISTER SYSTEM

The Company will apply to the ASX to participate in the Securities Clearing House Electronic Subregister System ("CHESS"). Under CHESS, the Company will not be issuing certificates to shareholders. Instead, shareholders will receive a statement (similar to a bank account statement) that sets out the number of Shares allotted to each of them under this Prospectus. The notice will also advise holders of their Holder Identification Number ("HIN") and explain, for future reference, the sale and purchase procedures under CHESS. Further statements will be provided to holders reflecting any changes in their shareholding in the Company during any month.

### 3.12 UNDERWRITING AGREEMENT

The Offer has been underwritten by KTM Capital Pty Limited ("KTM Capital"). KTM Capital is entitled to an underwriting fee of \$300,000 and a management fee of \$150,000. KTM Capital will also receive 3,903,692 options to acquire Shares in the Company at the exercise price of \$0.40 per option at any time up to 31 December 2007. Advanced Nano will also pay any Goods & Services Tax ("GST") payable in relation to any fees payable to the Underwriter. Details of the Underwriting Agreement, including the circumstances in which the Underwriter may terminate its obligations, are set out in Section 11.4.5.

### 3.13 OVERSEAS INVESTORS

It is the responsibility of investors to obtain all necessary approvals for the subscription for Shares under this Prospectus. This Prospectus does not constitute an offer in any place in which, or to any person to whom, it would not be lawful to make an offer.

Section Four

# THE NANOTECHNOLOGY SECTOR

*Image above: 5 nanometre Cerium Oxide Nanoparticles*

# THE NANOTECHNOLOGY SECTOR

## 4.1 OVERVIEW

Nanotechnology involves the creation and use of matter smaller than 100 nanometres. One nanometre ("nm") – a billionth of a metre – is 1/75,000<sup>th</sup> the width of a human hair. The range below 100 nm is important because materials in this range lie in the domain between the quantum effects of atoms and molecules, and the bulk properties of materials and hence materials in this range can possess new physical, chemical and biological properties that allow scientists to produce new materials with unique and enhanced properties

This means that, using nanotechnology, it is possible to produce novel products such as stain resistant textiles, clear natural sunscreens, transparent metal coatings, light weight cars, efficient fuel cells and drugs which are more readily absorbed by the human body.

Nanotechnology is likely to affect many industries. These include medicine, transport, energy, cosmetics, food, environment, drug delivery, biotechnology, electronics and computing. Nanotechnology involves the convergence of disciplines including materials science, engineering, physics, chemistry and biology to produce different approaches to the production of a wide range of items.

Whilst it is difficult at this early stage to estimate the overall market potential for nanotechnology, the United States National Science Foundation estimates the nanotechnology market will reach US\$1 trillion annually by 2011-2015. Many governments around the world are investing in the future of nanotechnology, with the United States Government alone committing approximately US\$3.7 billion to nanotechnology research. In 2001 the European Union countries allocated 1.2 billion Euros to the development of nanotechnology.

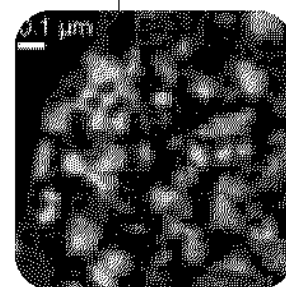
## 4.2 NANOTECHNOLOGY APPLICATIONS

Currently the commercialisation of nanotechnology is broadly occurring in three sectors – nanomaterials, nanoelectronics and nanobiotechnology. Advanced Nano's activities are focused on nanomaterials although significant opportunities for the Company's products exist in all three sectors.

Nanopowders and nanomaterials are expected to have applications across a wide range of industries including:

- micro and nano electronics;
- consumer applications including cosmetics and associated items;
- energy including fuel, explosives, fuel cells and electrodes;
- materials and manufacturing including abrasives, packaging, advanced ceramics and coatings;
- medicine and biotechnology including drug delivery and imaging; and
- environmental including catalysts and UV resistant coatings.

It is now possible to create nanomaterials with enhanced electronic, magnetic, optical, mechanical and chemical properties. The enhanced properties extend well beyond and offer far greater potential than just the inherent economy of geometry of miniaturisation. As a result of small particle dimension, high surface area, quantum confinement and other effects, at the nano size particles can exhibit a rich variety of unexpected properties that differ substantially from those of bulk materials.



Nanostructured fuel cell electrode

A grayscale electron micrograph showing numerous small, dark, cube-shaped particles of varying sizes scattered across a lighter, textured background. The particles are three-dimensional and appear to be arranged in a somewhat random pattern.

Section Five

# OVERVIEW OF ADVANCED NANOTECHNOLOGY LIMITED

*Image above: Cerium Oxide Nano Cubes*

# OVERVIEW OF ADVANCED NANOTECHNOLOGY LIMITED

## 5.1 OVERVIEW

Advanced Nano aims to be a broad-based nanomaterials company. The MCP™ nanopowder manufacturing technology is a platform technology that enables the production of a broad range of nanopowders that have the potential to penetrate the emerging global nanotechnology markets in areas such as cosmetics, industrial coatings, pharmaceuticals, health care, catalysts and advanced ceramics. The Company has generated, and expects to continue to generate, a portfolio of intellectual property pertaining to a range of applications of nanotechnology.

Advanced Nano's commercialisation strategy is focused on achieving early revenues by identifying high value, short time-to-market products which are expected to experience strong sustainable growth and where MCP™ nanopowders have a clear competitive advantage. In the larger, more difficult to penetrate markets, the Company is focussing its attention on the formation of strategic alliances with key partners.

The Company believes its competitive advantage stems from a number of areas including:

- Superior nanopowder and product quality;
- The use of industry standard raw materials and equipment;
- Strong intellectual property position providing barriers to entry by competitors; and
- A history of innovation and new product development.

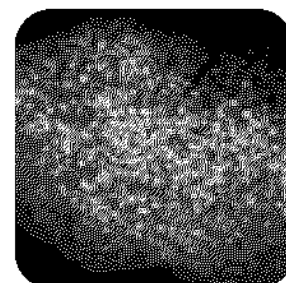
Advanced Nano currently has product offerings in the areas of personal care applications, industrial coatings and environmental technology. The Company is currently targeting growth through the development of new products in these sectors and new products in the pharmaceutical and advanced ceramics industries. The Company will continue to focus on further developing the MCP™ nanopowder manufacturing technology and also on developing higher level product manufacturing technologies that provide an extra level of intellectual property protection and further market differentiation from the existing nanopowder suppliers.

## 5.2 HISTORY

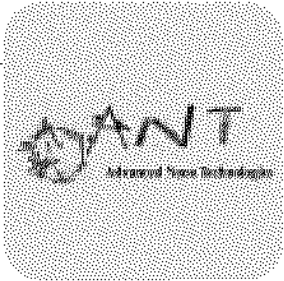
The origins of the MCP™ technology date back to 1987 when early experiments, carried out by Dr Paul McCormick (Chief Executive Officer of Advanced Nano) and his research group in the Mechanical Engineering Department at UWA, demonstrated that a ball mill could be used as a chemical reactor that enabled chemical reactions to occur at room temperature that previously required high temperatures to take place.

The original research and development was patented by UWA and in early work was applied to the development of processes for the refining of rare earth and other metals, synthesis of magnetic materials and toxic waste destruction through UWA's Research Centre for Advanced Mineral and Materials Processing ("RCAMMP").

In 1996 critical experiments demonstrating the synthesis of nanopowders via the MCP™ technology were successful. A patent application was filed and Advanced Nano was established in 1997 (originally named Advanced Powder Technology Pty Ltd) to commercialise the technology worldwide. Further research and development carried out by RCAMMP demonstrated the platform nature of the technology and a second patent was filed in 1999.



Nanoparticles (yellow)  
in salt matrix (blue)



Zirconia nano rods

In May 2000, Advanced Nano and Samsung Corning established ANT to develop the MCP™ technology at production scale. Samsung Corning invested \$6 million for a 50% share in ANT and a further \$1.5 million for a 10% shareholding in Advanced Nano. In April 2001, ANT obtained a \$2.8 million AusIndustry Start Grant and in July 2004, ANT successfully completed its mission of scaling the MCP™ process to production scale.

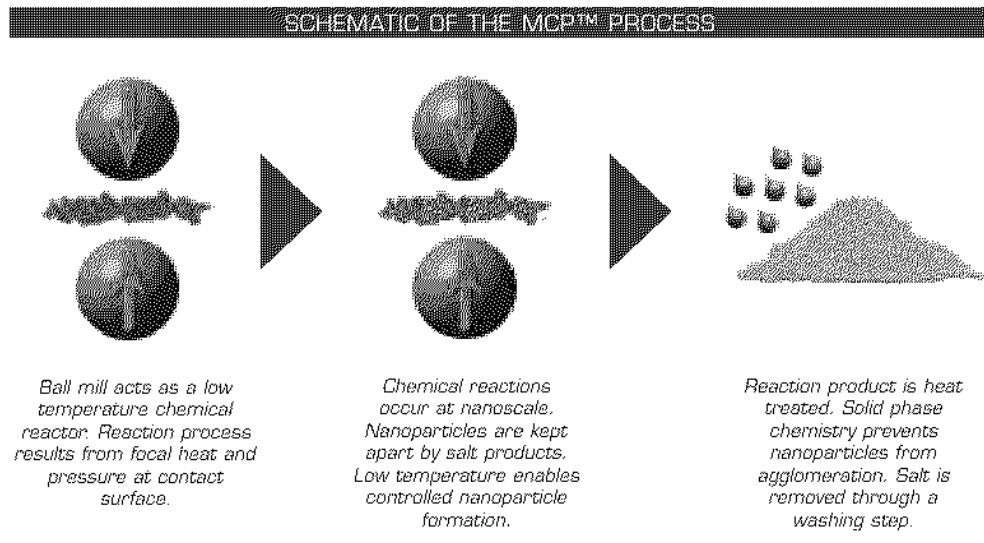
ANT and Samsung Corning have executed several agreements to provide for ANT to buy-back Samsung Corning's shares in ANT and to establish the co-ownership of ANT's intellectual property relating to the MCP™ nanopowder manufacturing process. These agreements, which are further discussed in Section 11.4.4, allow Advanced Nano and Samsung Corning to co-own the MCP™ nanopowder manufacturing intellectual property while independently developing and commercialising product applications of MCP™ nanopowders.

In this regard, Advanced Nano has developed its own application technologies, essential for incorporating MCP™ nanopowders into certain value added products. Advanced Nano is developing a growing intellectual property portfolio in personal care, nanoceramics and industrial coatings applications.

Over the past five years approximately \$18 million (including the above amounts) has been spent in developing and commercialising the MCP™ technology and related applications. Advanced Nano currently has corporate offices and manufacturing facilities in Welshpool, Western Australia and employs 25 staff.

### 5.3 THE TECHNOLOGY

The MCP™ technology is a novel, solid-state process for the manufacture of a wide range of nanopowders. Dry milling is used to induce chemical reactions through ball-powder collisions that result in nanoparticles forming within a salt matrix. Particle size is defined by the chemistry of the reactant mix, milling and heat treatment conditions. Particle agglomeration is virtually eliminated by the salt matrix, which is subsequently removed by a washing procedure.



The MCP™ technology is unique and differentiated from existing nanopowder production processes by virtue of the solid-state chemical reactions that enable the formation of dispersed nanoparticles with mean particle sizes less than 30 nm.

Key advantages of the MCP™ technology include:

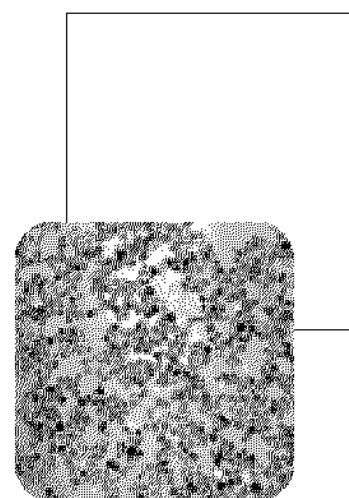
- **Small discrete particles.** MCP™ produces nanoparticles with a low level of agglomeration (the particles do not clump together), satisfying quality requirements for applications that require such low levels of particle agglomeration;
- **Narrow size distribution.** The MCP™ technology inherently produces nanoparticles with a narrow size distribution. This means the nanoparticles are all approximately the same size, an important attribute required for many applications
- **Size and shape control.** A key attribute of the MCP™ technology is that it allows control of particle size to meet customer's particle size requirements. By controlling surface chemistry it is also possible to produce particles with well defined shapes, such as rods or plates.
- **Cost.** The MCP™ technology utilises standard industrial process equipment and standard industrial chemicals, which the Company expects will provide a relatively low cost base for its high quality products.

#### 5.4 COMPETING TECHNOLOGIES

The nanopowder industry is a complex mixture of both mature and immature markets. Nanostructured fumed silica and carbon black have been manufactured for more than a half a century. Over the past decade there has been intense activity from a large number of companies engaged in the development of new production techniques to make nanopowders.

Competitive nanopowder technologies can be broadly categorised into those using traditional "top-down" approaches such as attrition milling and the newer "bottom-up" approaches which involve the controlled nucleation and growth of particles into either a gas or liquid phase by vapourisation/condensation or precipitation respectively. Whilst the existing techniques can achieve nanosize primary particles, scaled-up manufacture of unagglomerated nanoparticles has proved more complex due to the difficulties in keeping the newly formed nanoparticles separated. Advanced Nano's analysis of nanoparticles manufactured using vapourisation techniques generally reveals wide distributions of particle size and high levels of agglomeration. Manufacturers using precipitation techniques routinely produce very small nanoparticles, however the Company's analysis indicates the process can present a challenge to control agglomeration. The ability to manufacture dispersed nanoparticles with a mean particle sizes less than 100 nm and a narrow particle size distribution is very important to many applications of nanopowders.

The MCP™ technology is differentiated from existing nanopowder production processes in that MCP™ nanopowders are formed by a solid-state reaction, which allows control over particle size, size distribution and agglomeration.



Zirconia nanoparticles

## 5.5 APPLICATIONS TECHNOLOGIES

To leverage the MCP™ technology into high value products, Advanced Nano has developed processes to evenly disperse the nanoparticles into carrier media which are then used in downstream processing. This means the nanoparticles are usually sold to manufacturers in a dispersion. The ability to make high quality true nanodispersions is critical to the nanopowder market, as even minor levels of agglomeration can severely affect the properties of many final products. Advanced Nano has developed proprietary downstream processing techniques which allow the MCP™ nanopowders to be dispersed into a wide range of materials.

The quality of Advanced Nano's products stem from its ability to manufacture mono dispersed nanoparticles with controlled size, shape, surface and chemistry and to provide them in forms tailored to meet specific industry requirements.

## 5.6 MANUFACTURING FACILITIES

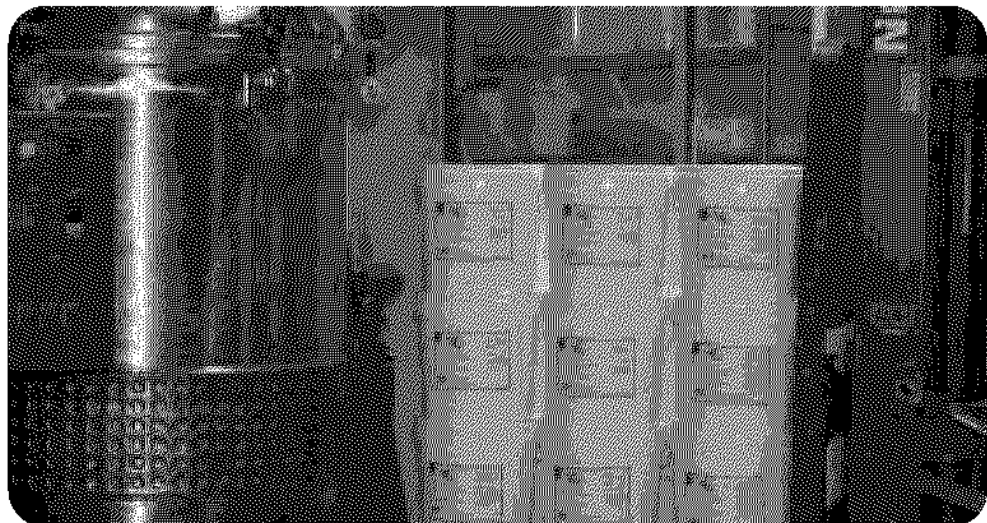
Advanced Nano currently operates manufacturing facilities in Welshpool, Western Australia. Advanced Nano is certified as a quality endorsed company under the ISO 9001:2000 quality standard. ISO is comprised of a network of national standards institutes from 148 countries and ISO 9001:2000 is among the organisation's most widely known and successful standards, having become an international reference for quality management systems.

Advanced Nano's ISO certification covers the manufacture and sale of coated and uncoated nanopowders and their dispersions for use in a wide range of cosmetic, pharmaceutical and industrial applications including transparent functional coatings, transparent inorganic sunscreens and moisturisers, catalysts and advanced ceramics and drugs with enhanced bioavailability. Registration also covers research and development of nanostructured products that exhibit enhanced properties.

Part of the proceeds from the Offer will be used to fund the expansion of Advanced Nano's nanopowder manufacturing facilities to increase manufacturing capacity to meet expected growing customer demand.



Advanced Nano's leading hand, Paul Williams, conducting an in-process quality check



Manufacturing to ISO 9001:2000 standards



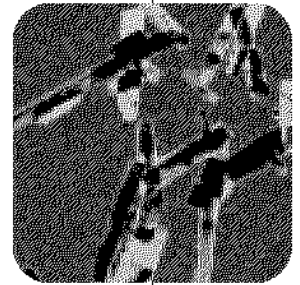
## 5.7 EXISTING PRODUCTS, MARKETS AND COMPETITION

### 5.7.1 Overview

Advanced Nano has launched three branded products using its nanomaterial technologies:

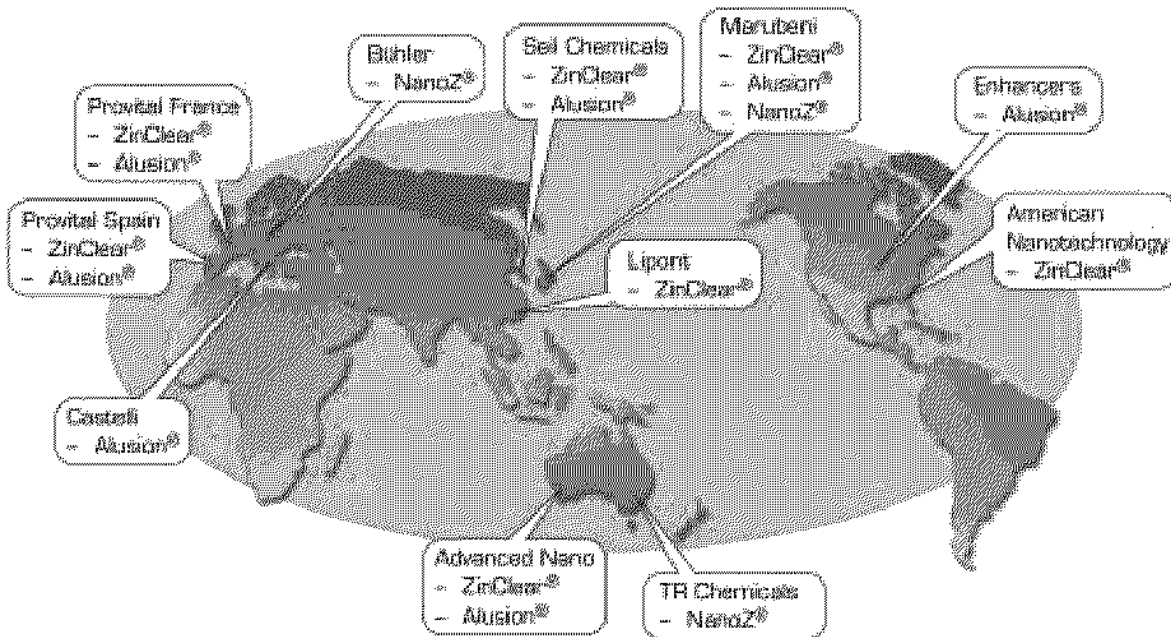
- **ZinClear®** – a transparent SPF 30+ sunscreen containing only zinc oxide as the UV absorber;
- **Alusion®** – soft focus effect pigments for masking the effects of ageing; and
- **NanoZ®** – for long life transparent UV absorbing coatings.

The fourth product that Advanced Nano manufactures is a cerium oxide nanoparticle dispersion, a key component in **Envirox™**. Envirox™ is a diesel fuel additive based on dispersed cerium oxide nanoparticles which trials have shown provides improvement in fuel efficiency and reduced carbon particulate emissions.

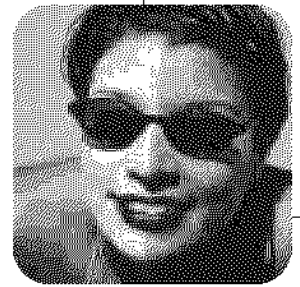


Zirconia rods

### ADVANCED NANO DISTRIBUTION NETWORK







Transparent zinc

### 5.7.2 ZinClear®

ZinClear® is a transparent dispersion of zinc oxide nanoparticles in various oils used in the personal care industry. ZinClear® overcomes the problem of skin whitening produced by conventional zinc oxide, enabling a cosmetically acceptable, SPF 30+ transparent sunscreen containing only zinc oxide as the UV absorber. ZinClear® has the potential for broad applications in daily wear cosmetics and skin care products.

Contemporary sunscreens that offer broad spectrum UV protection are formulated using a combination of UV absorbing chemical compounds. Market analysis of the cosmetic industry reveals a significant opportunity for a non-chemical, transparent, broad spectrum UV absorber. Zinc oxide is accepted as one of the safest known topical compounds providing broad-spectrum protection from UV rays, but has failed in the past to achieve significant market penetration because of cosmetically unacceptable skin whitening associated with conventional micron sized zinc oxide particles.

ZinClear® combines high transparency with the natural broad spectrum UV protection and well recognised safety of zinc oxide on skin. The first sunscreen containing ZinClear® was launched in 2002. Two new products were introduced in 2003 and five products incorporating ZinClear® have been launched in Australia and overseas in 2004.

The global sun care market is estimated to be a US\$4 billion market. Overall, UV absorber consumption in cosmetics is estimated to be approximately 8,000 tonnes (US\$200 million per annum) growing at approximately 8% per annum. ZinClear®'s market entry has been in the smaller, niche, all natural sunscreen market to allow the product to gain market acceptance in high value markets.

Business development activities are currently focused on penetrating overseas markets and the wider range of SPF cosmetic market segments such as daily wear face creams, moisturisers and foundations. A network of overseas distributors has also been established.

Advanced Nano has applied for patent protection for "Topical Sunscreen Formulation" covering transparent sunscreen formulations that contain only zinc oxide nanoparticles as the UV active ingredient. The market for ZinClear® may be restricted by an existing patent that covers the use of sub-200 nanometre zinc oxide particles in sunscreens (see Section 8.2 and the McCarthy Part Freedom to Operate Report at Section 10).

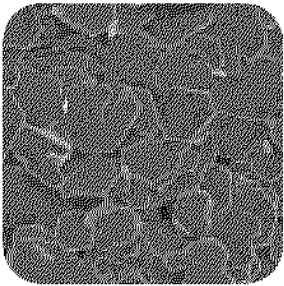


### 5.7.3 Alusion®

Alusion® is a grade of alumina powder designed to mask wrinkles and fine lines by diffusing transmitted light, known as a soft focus effect. The uniform platelet shape also provides a silky feel and strong skin adhesion whilst remaining translucent on the skin to enhance natural skin tones.

To date Advanced Nano's customers have used Alusion® primarily in the production of colour cosmetic products such as face powders, foundations, eye shadows, lipsticks, and some personal care products. Advanced Nano is utilising the combination of properties that Alusion® provides to position Alusion® as a new specialty powder aimed at translucent and/or sheer applications in the make-up and skin care markets.

The global market for colour cosmetics is estimated to be US\$28 billion and for skin care US\$38 billion. Cosmetic ingredients, such as Alusion®, are used in these markets and typically account for less than 5% of the total market, providing scope for cosmetics manufacturers to incorporate higher value ingredients in search of enhanced performance and market differentiation. Powders which provide soft focus effects, adhesion and silky feel have made significant inroads into the colour cosmetics ingredients market due to their enhanced performance over the traditional talcs and micas.

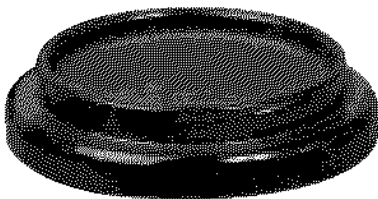


Alusion® platelets

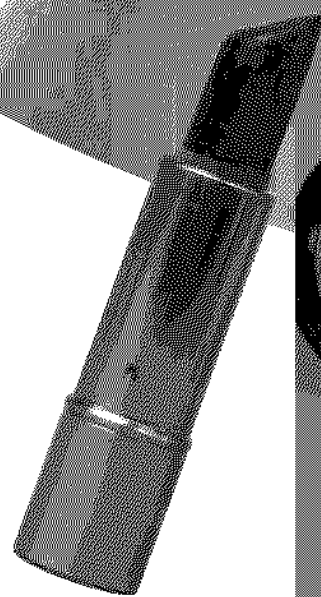
Advanced Nano is aware of two other sources of alumina platelets, of which only one is being sold in direct competition as a specialty powder. However, market feedback provided to Advanced Nano indicates that Alusion® exhibits a superior feel. Other specialty powders such as boron nitride, nylon powders, silica microbeads, lauroyl lysine, bismuth oxychloride, talc and mica also provide competition. The Company believes Alusion® is differentiated in the market by its combination of silky feel, high transparency and strong skin adhesion combined with the ability to make natural or mineral ingredient claims.

Advanced Nano launched Alusion® in Paris and New York in April and May 2003 and an international distribution network has been established in the major colour cosmetic markets. More than fifteen companies worldwide have taken Alusion® through their product coding requirements with Revlon, Avon and Prestige all recently launching products incorporating Alusion®.

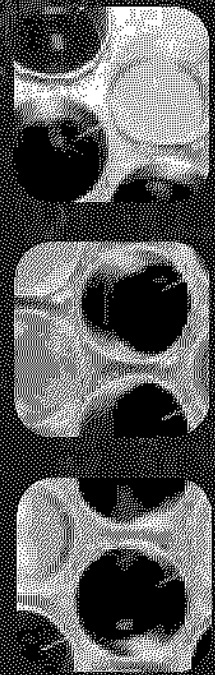
The Company believes the unique shape of Alusion® lends itself to a number of other applications including high temperature lubricants, wear resistant coatings, mould release coatings, ceramics and composites.



alusion



# nanoz



**nanoz**  
Transparent zinc oxide  
for UV protection  
for exterior applications

#### 5.7.4 NanoZ®

NanoZ®, a transparent UV blocking zinc oxide dispersion for the protection of timber and plastics, is Advanced Nano's first product used in industrial transparent functional coatings.

Transparent UV protective coatings to protect natural fibre, plastic and timber from the ravages of UV radiation present an exciting opportunity for Advanced Nano's transparent UV absorbing powders such as zinc oxide, ceria and iron oxide.

Transparent products that allow the natural beauty of wood such as colour, grain and texture to remain visible are generating increasing customer demand. However, the inability of these systems to shield the wood from UV light penetrating the coating and attacking the surface of the wood underneath has limited market growth. Incorporating UV absorbers, such as Advanced Nano's zinc oxide, into the coating can provide protection to the surface whilst retaining the natural beauty of the wood.

The coatings and plastic industry is estimated to utilise about 20,000 tonnes per annum of UV absorbers and UV stabilisers worth approximately \$500 million. One million tonnes of wood coatings are estimated to be used globally and these are increasingly incorporating UV stabilisation to enhance the life of the wood for both interior and exterior applications.

Advanced Nano made its first sale of NanoZ® in January 2004 to coatings manufacturer Bondall Marketing Pty Ltd ("Bondall") following a joint research and development program including UV stability testing. Bondall has subsequently launched its second generation Monocel™ line which uses NanoZ® and is now incorporating NanoZ® across more of their product lines.

Advanced Nano has appointed distributors for NanoZ® in Australia, Japan and Europe. The Company believes that NanoZ® wood finishes will provide transparent inorganic UV absorber based coatings to meet the increasing demand for long lasting clear coatings.

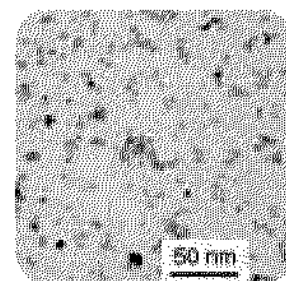
#### 5.7.5 Ceria Based Fuel Borne Catalysts – Envirox™

Advanced Nano currently supplies Cerulean cerium oxide nanoparticle dispersions to use as the active catalyst material in their product, Envirox™. Envirox™ is a fuel additive which trials have shown provides cleaner and more efficient fuel burning in diesel engines.

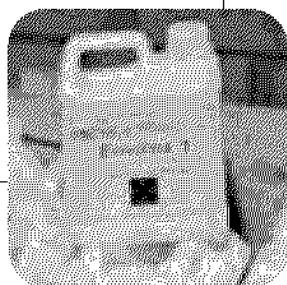
Cerulean is a wholly owned subsidiary of Oxonica Limited ("Oxonica"), one of the UK's leading nanotechnology companies. Oxonica was created in 1998 to commercialise intellectual property developed over many years at the University of Oxford, and has rights to patents for the use of nanoparticles of cerium oxide as a fuel borne catalyst. Currently employing 30 professional staff, Oxonica is application focused with a portfolio of in-house developed new product opportunities.

Cerulean initiated discussions with Advanced Nano after a search for individual and dispersible ceria nanoparticles that would deliver the required catalytic effect and remain transparent in a fuel. Cerulean have run Envirox™ field trials in bus fleets in Hong Kong and the UK and such trials have shown improvements in output efficiencies and fuel consumption. In December 2004, Cerulean confirmed that the Stagecoach Group plans to introduce Envirox™ over the next six months across their 7,000 strong bus fleet in the UK after the success of a 12 month commercial evaluation.

The Stagecoach Group is a leading international transport operator, with bus and rail operations in the UK and bus operations in the United States and New Zealand. Cerulean also confirmed Stagecoach's tests of the product over the last year in the north west of England and London delivered more than a 5% cut in fuel consumption.



5 nm cerium oxide



Envirox™

Over the past 12 months Advanced Nano has supplied ceria dispersions for Cerulean's trials and if these trials are successful expect orders to increase. Advanced Nano and Cerulean are currently negotiating the terms and conditions of a formal supply agreement.

## 5.8 NEW PRODUCT DEVELOPMENT

Part of the proceeds of the Offer will be used to fund the development of new products based on MCP™ nanopowders. In addition to the products currently being commercialised, several new nanoparticle and nanomaterial applications are at earlier stages of their research and development program.

### 5.8.1 Iron Oxide Nanopowders and Dispersions

Advanced Nano is currently developing nanopowder dispersions based on iron oxide, with dispersions of two different particles under development. Potential applications include transparent UV absorbers, cosmetics, transparent magnetic coatings, catalysts, drug delivery, biomagnetic separation, MRI contrast agents and others. Advanced Nano is initially focusing on opportunities in the UV absorber and cosmetics markets, to be followed by the industrial coatings markets.

### 5.8.2 Advanced Nano Ceramics

Advanced ceramics are wear and corrosion resistant materials used in a wide range of industrial and commercial applications. The market for advanced ceramics is significantly limited by high manufacturing costs.

The world wide market for ceramic products manufactured by processes that enable final dimensions to be obtained without costly grinding is forecast to exceed US\$3 billion in 2006, with the market for powders used in structural ceramics forecast to exceed US\$400 million. The market is dominated by major Japanese manufacturers. High quality zirconia powders sell for up to \$50/kg, while simple sintered products can sell for more than \$500/kg.

Ceramic nanopowders offer the potential to change the ceramic component landscape by enabling significantly reduced processing temperatures and manufacturing costs.

Advanced Nano's researchers have developed a zirconia nanopowder composition that enables components to be manufactured with processing temperatures as low as 1100°C and displaying excellent properties. The Advanced Nano composition appears to be novel and a provisional patent application has been filed.

Advanced Nano believes that, whilst it is still at an early stage, its intellectual property has the potential to significantly change product manufacturing processes toward lower cost, mass production techniques. As such, the Company believes there is significant opportunity for Advanced Nano to expand into this sector.

### 5.8.3 Pharmaceuticals and Health

An important potential application of Advanced Nano's platform MCP™ technology is the synthesis of nanosized drug particles. In addition to pharmaceuticals, the Company believes the MCP™ technology has the potential for broader application in the therapeutic, cosmeceutical and veterinary sectors.

It is estimated that one third of all drug compounds listed in the United States Pharmacopoeia are poorly soluble and up to 40% of all newly synthesised drug candidates have insufficient solubility to progress to preclinical evaluation. Many of the drugs that do progress are limited by the absorption process where the dissolution and take up of the drug is low.



Pharmaceuticals and health



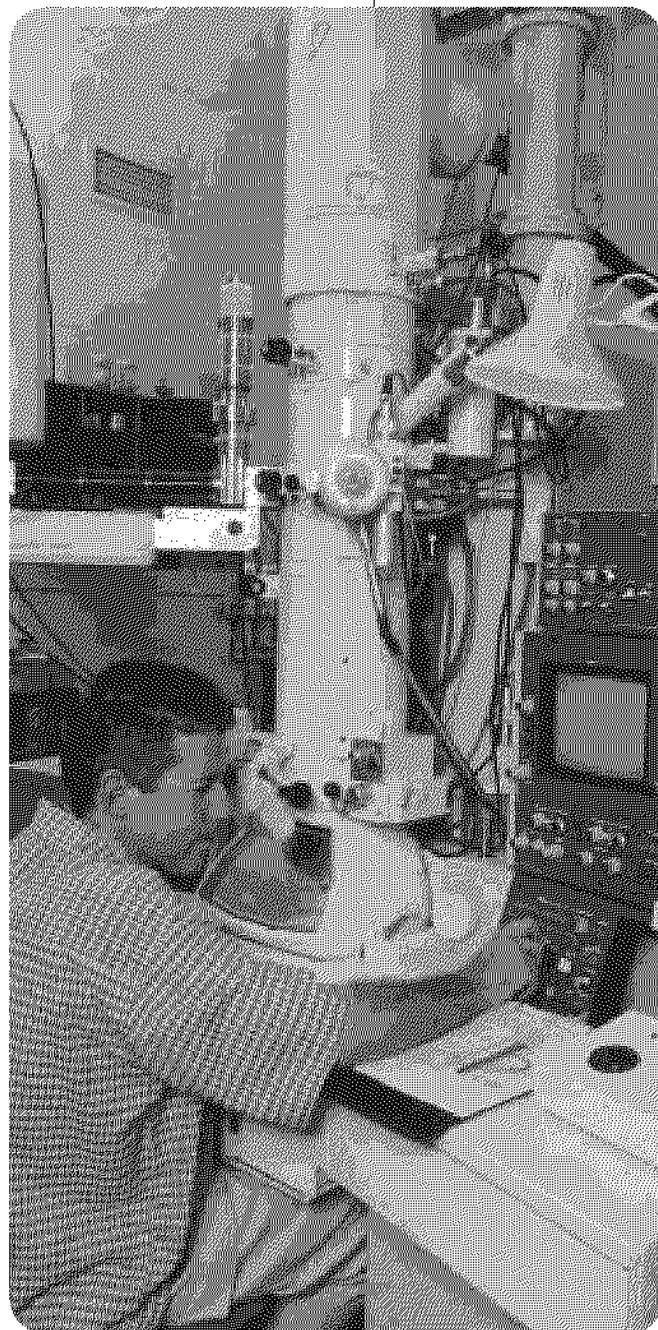
The low solubility of many drugs is one of the most challenging issues in the formulation of new drugs. Reformulation of pharmaceutical compounds to the nano-scale has the potential to enhance the performance of poorly soluble, difficult to administer drugs by delivering clinically significant doses faster, by using lower doses with controlled release profiles and through achieving more desirable delivery mechanisms.

By enhancing bioavailability, nanoparticles have the potential to not only allow new drugs to enter the market but also to extend the intellectual property protection of existing drugs by increasing their efficiency. Nanoparticles may also be used as a means of improving the administration of drugs via oral and nasal routes, as well as targeting specific organs. Nanoparticles are especially suitable for intravenous administration.

Advanced Nano's drug research program will focus on the synthesis of nanosized drug particles via the MCP™ process to demonstrate enhanced properties. The objective of Advanced Nano's proof of concept study will be to demonstrate that one or more nanoscale organic pharmaceutical compounds with enhanced bioavailability can be synthesised via the MCP™ technology. As is the case with Advanced Nano's existing products, successful development of the solid state, MCP™ reaction route for nano drug synthesis may provide the basis of a versatile, new manufacturing process.

The Company's commercialisation strategy in this area is focused on the establishment of one or more key alliances or partnerships with Australian and overseas pharmaceutical companies with strengths in drug development and drug delivery. The model is to join Advanced Nano's synthesis strength with an appropriate partner to accelerate the development program, making optimum use of the strengths of each alliance partner. The data generated in the proof of concept phase of the project will be used to attempt to elicit the interest of larger pharmaceutical companies in a more detailed evaluation of the technology through licensing or other income generating routes.

Another potential application of the MCP™ technology is in the area of cosmaceuticals. Cosmaceuticals are topically applied and primarily aimed at improving appearance, but they also have a secondary role, closer to that of dermaceuticals, of delivering nutrients necessary to maintain healthy skin, prolonging youthful skin and improving skin repair. Advanced Nano is currently evaluating potential product applications in the anti-ageing, natural anti-microbial areas of the cosmaceutical market.



*Advanced Nano's principal research scientist, Dr John Robinson, using an electron microscope*

## 5.9 INTELLECTUAL PROPERTY

### 5.9.1 Nanopowder Manufacturing Technology

The MCP™ technology for the production of nanopowders is protected by three international patents and one patent application which are all co-owned with Samsung Corning.

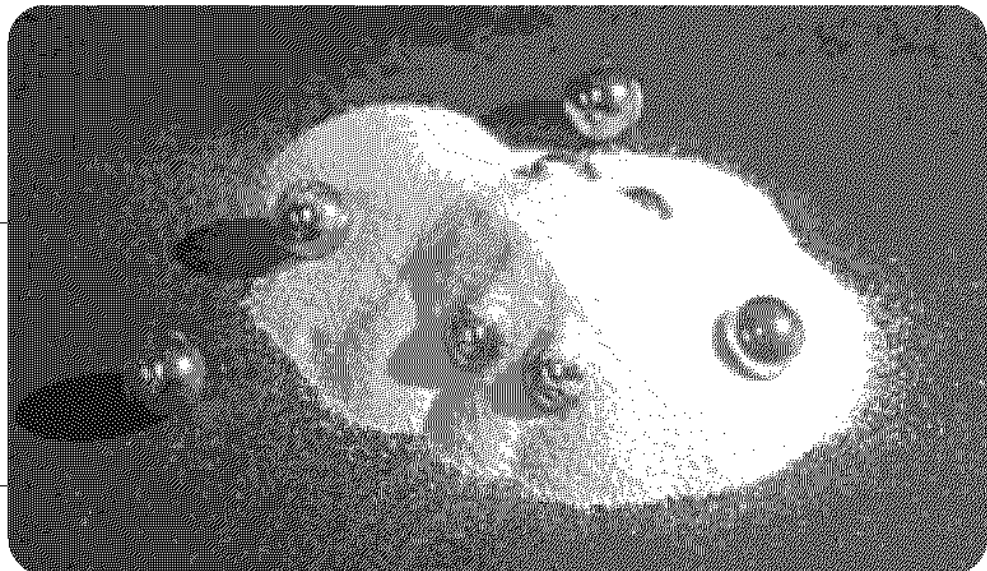
- Process for the Production of Metals, Alloys and Ceramic Materials: use of a ball mill as a mechanochemical reactor vessel in which mechanically activated chemical reactions, specifically oxidation-reduction reactions are caused;
- Process for the Production of Ultrafine Particles: manufacture of ultrafine and nanoparticles by mechanically activated chemical reactions between a metal compound and a suitable reactant; and
- Process for the Production of Ultrafine Powders: manufacture of ultrafine nanoparticles by the mechanical milling of suitable precursor compounds with non-reactive diluent phases to form ultrafine and nanoparticles.

A fourth patent application, Process for the Production of Ultrafine Plate-like Alumina Particles, covers the process for producing alumina platelets.

### 5.9.2 Intellectual Property shared with Samsung Corning

Advanced Nano and Samsung Corning co-own certain intellectual property related to the MCP™ nanopowder manufacturing process technology developed by ANT (refer Section 11.4.4 for a summary of the co-ownership agreement with Samsung Corning). This intellectual property includes:

- Original MCP™ intellectual property transferred by UWA to ANT as part of the shareholders agreement relating to ANT and any UWA improvements thereon;
- Equipment design intellectual property developed by ANT for the manufacture of MCP™ nanopowders up to the date of ANT's buy-back of Samsung Corning's Shares in ANT;
- Nanopowder synthesis intellectual property developed by ANT up to the date of ANT's buy-back of Samsung Corning's Shares in ANT.



*Advanced Nano's specialty powders*

Advanced Nano and Samsung Corning jointly make decisions regarding patent filing and maintenance and share the costs involved. The Company believes that co-ownership of the ANT intellectual property provides a strong benefit to Advanced Nano because of Samsung Corning's substantial international reputation which effectively signals to competitors that the patents are likely to be vigorously defended should a challenge arise.

Advanced Nano and Samsung Corning currently operate in different market sectors and in any case each must develop their own product intellectual property to manufacture and market their nanopowder products. The Company believes that the value of having a major partner for patent enforcement outweighs potential competitive risks of having Samsung Corning compete in the Company's markets.

### 5.9.3 Product Application Technology

In addition to maintaining protection for the core MCP™ manufacturing technology, Advanced Nano's intellectual property strategy is to selectively protect the use of nanopowders in new product applications through both process and end use patents. The Company protects product applications and new product processes where it can be demonstrated that patent protection is justified. Advanced Nano's policy is to hold certain key process design intellectual property as proprietary trade secrets rather than seeking patents to avoid copying by competitors. Samsung Corning does not have any rights to Advanced Nano's own product application patents or trade secrets.

At the date of this Prospectus, two product/application patents have been filed and a further two patent applications are under preparation.

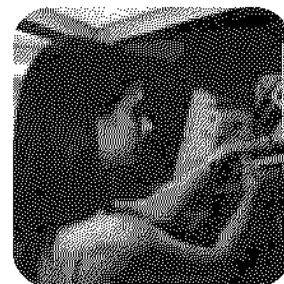
#### *Filed*

- **Transparent Chemical-Free Sunscreens:** patent application for a transparent, chemical absorber-free zinc oxide illustrates Advanced Nano's intellectual property strategy. If successful, this patent will give Advanced Nano a strategic position in the market.
- **Highly Sinterable Nano Ceramic Compositions:** patent application for highly sinterable nano ceramic compositions will, if successful, provide protection and freedom to operate in the advanced nano ceramics market.

#### *Under preparation*

- **Particle Coating Process for Zinc Oxide Nanoparticles:** Advanced Nano's application will cover coating processes for zinc oxide nanoparticles and provide freedom to operate.
- **Chemically Bonded Aluminium Oxide Platelets:** Advanced Nano's application will cover compositions and properties of coatings manufactured from MCP™ aluminium oxide platelets.

The Company believes it has a strong intellectual property position covering key aspects of the technology. Additional information concerning the intellectual property position of Advanced Nano is outlined in Section 8.2 and in the Griffith Hack Patent Attorney's Report in Section 10.



*Advanced Nano's research scientist, Dr Lara Heatley, performing crystal structure analysis*

A black and white, high-magnification microscopic image of alumina platelets. The platelets are irregular, angular, and layered, creating a complex, textured appearance. The lighting highlights the edges and surfaces of the individual platelets, giving them a three-dimensional look.

Section Six

# BOARD OF DIRECTORS AND MANAGEMENT TEAM

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*Image above: Alumina Platelets*

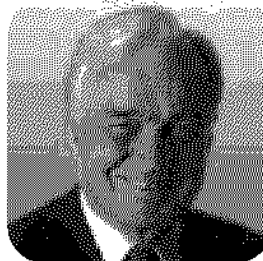
# BOARD OF DIRECTORS AND MANAGEMENT TEAM

## 6.1 BOARD OF DIRECTORS

### **Mr Harold Clough AO, OBE**

#### *Non-Executive Chairman*

Harold Clough is highly distinguished in Australia's engineering industry. He joined the Clough family company in 1954 and served as Managing Director until 1988. Mr Clough's contribution to the development of Australia's trade relations and the advancement of the engineering profession has been extensively acknowledged by a range of prestigious awards including the Queen's Honours in 1977, 1979 and 1990. He was acknowledged as WA Citizen of the Year in Industry and Commerce in 1983, and won the Australasian Institution of Electrical Engineers James N Kirby Award, the Institution of Engineers Australia Peter Nicol Russell Memorial Medal in 1993, as well as the Australian Institute of Company Directors (WA) inaugural gold medal for contributions to engineering, industry and commerce in 1994.



In 1997, Mr Clough received a Services to Construction Award from the Australian Contractors' Association in recognition of his lifelong contribution to the construction industry. In April 2000, Mr Clough was named one of Australia's Export Heroes.

### **Mr David Griffiths**

#### *Non-Executive Director*

David Griffiths is a Division Director of Macquarie Bank Limited and has been with that company since March 1999 when Macquarie Bank acquired Perth stockbroker, Porter Western Limited, where he was Executive Chairman. Prior to that Mr Griffiths had over 20 years experience in senior financial executive roles in a wide range of industries. He has a Bachelor of Economics (Hons) from the University of Western Australia and a Master of Economics from the Australian National University.



Mr Griffiths is a member of the Senate of the University of Western Australia and is Chairman of its Strategic Resources Committee. He is also a non-executive director of RentSmart Holdings Limited and sits on the board of the Perth International Arts Festival.

### **Mr Robert Mangioni**

#### *Non-Executive Director*

Robert Mangioni is a founding partner of the Sydney based law firm Watson Mangioni. Mr Mangioni has over 20 years experience in the practice of law in Australia and London. He holds a Bachelor of Arts and a Bachelor of Laws from the University of New South Wales. Previously he was a senior associate of law firm Allen Allen & Hemsley and a partner of law firm Tress Cocks & Maddox. He has extensive experience in corporate and commercial law including corporate governance, market regulation, takeovers and public floats.





Back row: Sean Galvin, David Lee, John Robinson, Brian Innes.  
Front row: Deana Cesari, Paul McCormick, Anne Hall, Takuya Tsuzuki.

**Dr Paul McCormick**

*Chief Executive Officer*

Paul McCormick is a fellow of the Australian Academy of Sciences, the Australian Academy of Technological Sciences and Engineering, the Institute of Materials in London, the American Society for Materials, the Institution of Engineers Australia, and the National Research Institute for Metals, Japan. Dr McCormick is an internationally recognised researcher in the areas of mechanochemical processing and synthesis of nanopowders. His previous positions have been in senior roles in academia, including Director of both the Western Australian Centre for Microscopy and Microanalysis and the Research Centre for Advanced Mineral and Materials Processing.

Dr McCormick's research has resulted in over 300 publications, eight patent applications, including four granted US patents, and has attracted significant research funding from industry and government sources. He has had major research and development contracts with a number of companies, including CRA Limited, Queensland Alumina Limited, Akzo Nobel Powder Coatings Limited and Rocla Industries Limited to develop mechanochemical processing technologies for mineral processing and waste remediation.

**6.2 MANAGEMENT TEAM**

**Ms Deana Cesari**

*Chief Financial Officer and Company Secretary*

Deana Cesari is responsible for the group's accounting, financial management, and company secretarial functions. Ms Cesari has over 10 years experience in financial and commercial roles, with prior positions including four years with KPMG, five years as group financial controller and company secretary with Orbital Engine Corporation (Perth) and four years as commercial director and general manager of Orbital Fluid Technologies (Virginia, USA). Ms Cesari holds a Bachelor of Commerce from the University of Western Australia and is a member of the Institute of Chartered Accountants in Australia.

**Mr Brian Innes**

*Business Development Manager*

Brian Innes holds Bachelor of Engineering (Honours) and Bachelor of Commerce degrees from the University of Western Australia, and has been working with MCP™ nanopowders since 1998. Mr Innes works in the area of business development and international marketing and brings a strong understanding of the MCP™ technology, inorganic materials and the requirements of product development and industrial marketing to his role as Business Development Manager. Mr Innes was previously employed by the international industrial consultants Hagen and Co.

**Mr David Lee**

*Production Manager*

David Lee holds a Bachelor of Engineering degree in Mechanical Engineering from the University of Western Australia. Mr Lee brings ten years experience in mechanochemical processing and an extensive background in nanopowder production technology. As Production Manager, Mr Lee is responsible for all aspects of nanopowder and product manufacture.

**Mr Sean Galvin**

*Product Development Manager*

Sean Galvin holds a Bachelor of Engineering (Honours) in Materials Engineering from the University of Western Australia. Mr Galvin is responsible for Advanced Nano's product development, taking new products from the research and development stage to final product. Mr Galvin also plays a key role in Advanced Nano's ISO 9001 quality system and information systems. Mr Galvin was previously employed by Tubemakers Australia.

**Dr Takuya Tsuzuki**

*Research and Development Manager*

Dr Takuya Tsuzuki earned his Doctor of Philosophy degree in 1995 from Kyoto University, one of Asia's most prestigious universities. Dr Tsuzuki joined the Research Centre for Advanced Mineral and Materials Processing of the University of Western Australia in 1995 and was a key member of the project team that developed the MCP™ nanopowder technology. Dr Tsuzuki joined ANT at its inception and is responsible for Advanced Nano's research and development activities. In 2004 the Nanotechnology Benchmarking Project commissioned by the Australian Academy of Science named Dr Tsuzuki as one of Australia's leading nanotechnology researchers.

**Dr John Robinson**

*Principal Research Scientist*

Dr John Robinson holds a Bachelor of Engineering (Honours) in Mechanical Engineering and a Doctor of Philosophy in Materials Engineering from the University of Western Australia. Prior to joining Advanced Nano, Dr Robinson had over seven years industry experience in Australia and the UK in product and process development. As Principal Research Scientist, Dr Robinson leads the Alusion® and Envirox™ product development teams.

Section Seven

# FINANCIAL INFORMATION

*Image above: Cerium Oxide Nano Cubes*



# FINANCIAL INFORMATION

## 7.1 ADJUSTED HISTORICAL FINANCIALS

A summary of the Advanced Nano Pro-forma Consolidated Statement of Financial Performance for the years ending 30 June 2004 and 30 June 2003 is set out below. The assumptions underlying the summary Pro-forma Consolidated Statement of Financial Performance and the detailed Pro-forma Consolidated Statement of Financial Performance are set out in the Independent Accountant's Report (refer Section 9).

Year ended 30 June	2004	2003
	\$'000	\$'000
Revenue	1,116	662
Loss from ordinary activities before related income tax	4,089	4,414

A summary of the Advanced Nano Pro-forma Consolidated Statement of Financial Position is set out below, incorporating the Statement of Financial Position as at 30 June 2004 adjusted for the Offer. The assumptions underlying the summary Pro-forma Consolidated Statement of Financial Position and the detailed Pro-forma Consolidated Statement of Financial Position are set out in the Independent Accountant's Report (refer Section 9).

As at 30 June	2004
	\$'000
Current Assets	13,036
Non-Current Assets	7,337
Total Assets	20,373
Current Liabilities	1,094
Non-Current Liabilities	279
Total Liabilities	1,373
Shareholders Equity/Net Assets	19,000
Net Tangible Assets	12,529

## 7.2 FINANCIAL PROSPECTS

The principal factors determining the future revenues and earnings generated by the Company include market acceptance of the products offered by the Company, the impact of the competitive activities undertaken by other market participants, and the ability of the Company to manufacture and supply nanopowder products in significant quantities, with consistent quality and at an acceptable cost.

Advanced Nano commenced commercial production of nanopowders in 2002 and from a small base has achieved promising growth in both the volume of nanopowders sold and the dollar value of sales. Part of the proceeds from the Offer will be used to fund the expansion of Advanced Nano's nanopowder manufacturing facilities to increase manufacturing capacity to meet expected growing customer demand. Advanced Nano expects future sales to increase from historical levels. The Directors have elected to not include forecast sales information in this Prospectus because of the uncertainty involved in estimating future customer demand.

On successful completion of the float, Advanced Nano will have no significant debt, and cash resources of approximately \$9.5 million. Advanced Nano believes that these cash resources are sufficient to fund the the Company's current plans as described in this Prospectus. However, should new opportunities, unexpected costs, or higher levels of growth arise, it may be necessary to raise further funds to take advantage of such opportunities.

Section Eight

# RISK FACTORS

*Image above: Alumina Platelets*

# RISK FACTORS

The business activities of Advanced Nano are subject to risks and there are many factors which may adversely impact on its future performance. Some of these risks can be mitigated by the use of safeguards and appropriate systems and controls, but many are outside the control of the Company and cannot be mitigated. There are also general risks associated with any investment. Investors should consider all of these risks before they make a decision whether or not to apply for Shares. In addition, investors should speak to their financial, legal or other advisor about these risks before making a decision to invest in Shares. As a result of these risks, and because Advanced Nano is at an early stage of development, an investment in Advanced Nano should be considered speculative. The principal risk factors include, but are not limited to, the following:

## 8.1 TECHNOLOGICAL OBSOLESCENCE

The process by which Advanced Nano manufactures nanopowders may in time become obsolescent in comparison to competing technologies to produce nanopowders. Competitive technologies may produce nanopowders with superior qualities or at a lower cost. Advanced Nano continues to incur expenditure on improving its patented manufacturing process to reduce this risk, however it can never be eliminated.

## 8.2 PATENT INFRINGEMENT

Advanced Nano owns or co-owns a number of patents in relation to the manufacture of nanopowders and the downstream processing of these powders (see Section 10 for further details). It is likely Advanced Nano will continue to generate further intellectual property in the future as a result of its research and development and other activities. Not all of this intellectual property will necessarily be covered by patent protection. In any event, the granting of patent protection may not guarantee complete protection of the Company's intellectual property in all relevant geographical areas. Even if Advanced Nano is successful in obtaining patents in relation to certain intellectual property, the enforceability of these patents by Advanced Nano is a risk factor. In most jurisdictions, it is a costly and protracted exercise to enforce patent infringements. Advanced Nano is a small company with limited financial resources. The granting of patent protection may not therefore guarantee complete protection of the Company's intellectual property.

Patent applications are maintained in secrecy for a period of time after filing. Therefore, there can be no assurance that the Company's patent applications will not be invalidated by prior art or that the Company's products do not infringe existing patents. To avoid an infringement, the Company would have to either license such technology or design around any such patents. There can be no assurance that the Company will be able either to successfully design around third party patents or obtain licences to such technology or that, if obtainable, such licences would be available on terms acceptable to the Company.

There is a risk that Advanced Nano's freedom to manufacture and market ZinClear® may be restricted by existing patents covering the use of zinc oxide nanoparticles in transparent topical sunblock formulations (see the McCarthy Part Freedom to Operate Report per Section 10).

There can be no assurance that the Company's manufacture of ZinClear® or other products, or the manufacture and distribution of products by third parties incorporating Advanced Nano's ZinClear® or other products, will not infringe existing patents or that the patent owners will not

exercise their right to seek injunctive relief and/or damages, or that third party manufacturers or distributors will not in turn seek damages from the Company as a result of action by the patent owners.

### 8.3 INDUSTRIAL ESPIONAGE

Advanced Nano's success depends in part on its ability to protect its proprietary intellectual property rights. However, it may be possible for a third party to copy, or otherwise obtain and use, the Company's proprietary rights. Advanced Nano employs a number of staff in the area of research and development and in its manufacturing business, and necessarily discloses to these employees the trade secrets concerning its manufacturing process and dispersion production. There is a risk that employees of Advanced Nano or third parties with whom the Company deals may disclose these trade secrets to competitors of Advanced Nano for commercial advantage. There can be no assurance that any protective measures taken by the Company have been, or will be, adequate to protect the Company's proprietary rights.

### 8.4 LONG TERM EFFECT OF NANOTECHNOLOGY

The development of nanotechnology is at an early stage. The full impact of this technology is not yet measurable in relation to its impact on the natural world. There may be concerns over safety that could affect demand for some of the Company's products or may involve litigation. There are activists in certain parts of the world who fear the long term effects of nanotechnology on health and the environment. Activities undertaken by groups of this nature, as well as threatened and actual litigation, pose a risk to the future business of Advanced Nano.

### 8.5 DEPENDENCE ON GENERAL ECONOMIC CONDITIONS

In common with other companies, Advanced Nano may be affected by general economic conditions including the level of interest rates, currency exchange rates, tax regulation and tax rates, global and national economic cycles, global and national stability, employment rates, inflation changing consumer demands, and spending by customers on related products and services. Any changes in the fiscal, monetary and regulatory policies of any government may also adversely affect the Company's business.

### 8.6 RECENT GROWTH RECORD AND FUTURE PROFITABILITY

The Company has a limited history of commercial sales as it has only recently moved from research and development to commercialisation of its technology. Future growth is dependent upon many factors including those which are set out in this Prospectus. There is no assurance that the recent growth of the Company is sustainable, or is indicative of future growth and profitability and dividend payments. Nor is there any assurance that revenue will increase in response to research and development, marketing and promotional activities proposed to be undertaken by the Company. There is no assurance that the Company's products will be readily taken up by the market or taken up at all. There is also no assurance as to future profitability or that dividends can be paid as they are dependent upon future earnings and the working capital requirements of Advanced Nano which cannot yet be reliably established.

#### 8.7 LIMITED MANUFACTURING CAPACITY AND EXPERIENCE

The Company's success will depend, in part, on its ability to manufacture and supply nanopowder products in significant quantities, with consistent quality and at an acceptable cost.

The Company has limited experience in high volume manufacturing and may incur significant start-up costs and unforeseen expenses in connection with attempts to manufacture substantial quantities. There can be no assurance that the Company will be able to manage this scale-up in activities effectively, which may adversely impact on the Company's future profitability.

The Company will need to expand its existing manufacturing facilities and/or obtain other facilities in the near future in order to manufacture adequate quantities of its products to meet expected customer demand. Advanced Nano may be unable to make the transition from pilot manufacturing to high volume manufacturing successfully or on a timely or cost-effective basis.

#### 8.8 RELIANCE ON KEY PERSONNEL

The Company's success will depend in part on the continued services of its key employees and contractors. The loss of services of one or more of the Company's key employees or contractors could have a material adverse effect on the Company. This risk is addressed in part by the existence of three year service contracts with Dr McCormick and Ms Cesari (refer Sections 11.4.6 and 11.4.7 respectively) and a key man insurance policy with respect to Dr McCormick.

#### 8.9 NEED TO ATTRACT QUALIFIED STAFF

The Company's future success will in part depend on its ability to hire and train suitable staff. Competition for such personnel is intense and there can be no assurance that Advanced Nano will be successful in attracting and retaining such personnel on reasonable terms or at all. The Directors believe that the implementation of the ESOP will assist in attracting and retaining key staff (refer Section 11.3).

#### 8.10 MANAGEMENT OF GROWTH

Advanced Nano has experienced a period of rapid growth and an increase in the number of its employees and the scope of its supporting infrastructure. This growth has resulted in new and increased responsibilities for management and has placed and will continue to place a significant strain on the Company's management. The Company will be required to continue to implement and improve its systems on a timely basis in order to accommodate the increased number of transactions and customers and the increased size of its operations.

### 8.11 THE NANOMATERIALS MARKET AND COMPETITION

The nanotechnology market is subject to rapid technological change and competition. Estimates of market sizes in this Prospectus may prove to be incorrect over time. Advanced Nano faces competition from other organisations in many parts of the world, many of which may have significantly greater financial, technical and marketing resources than the Company. Advanced Nano has faced, and is expected to continue to face, additional competition from new entrants into its markets. The prospect of new and substantial competition arising in those markets over time cannot be excluded, with consequential significant adverse effects on the Company's market share and profitability. Increased competition could result in lower customer numbers, under-utilisation of employees and equipment, reduced operating margins and loss of market share. Any of these occurrences could adversely affect the Company's business, operating results and financial condition. There can be no assurance that Advanced Nano will be able to compete successfully against current or future competitors. Samsung Corning has access to the MCP™ nanopowder technology and may choose to develop products to compete in markets targeted by the Company.

### 8.12 INTERNATIONAL SALES

For the 2004 financial year significant revenues were derived from product sales to international customers. Advanced Nano conducts its business activities in foreign markets and is accordingly subject to international risks arising from political and economic activity, payment collection, foreign exchange risks and the imposition of taxes in those foreign markets without compensating credits being available in Australia.

### 8.13 PRODUCT LIABILITY RISKS

Advanced Nano may be subject to product liability claims in the event any of its products are alleged to be defective or cause harmful effects. Because the Company's products are used as ingredients in, or components of, other companies' products, to the extent certain of Advanced Nano's customers become subject to claims, suits or complaints relating to their products, such as cosmetic and skin care products, there can be no assurance that such claims will not be asserted against the Company. Advanced Nano currently maintains insurance coverage for product liability claims. The cost of defending or settling product liability claims may be substantial and there can be no assurance that the Company could do so on acceptable terms or that such claims, if successful or settled, would not have a material adverse effect on the Company's business, results of operations and financial condition.

### 8.14 GOVERNMENT REGULATIONS

Advanced Nano's facilities are subject to various regulations including in relation to occupational health and safety, the storage and handling of dangerous goods, Department of Environment licensing and disposal of effluents and waste. It is possible that current or future laws and regulations could require the Company to make substantial expenditures for preventative or remedial action, reduction of chemical exposure or waste treatment or disposal. There can be no assurance that Advanced Nano's operations, business, products or assets will not be materially and adversely affected by the interpretation and enforcement of current or future laws and regulations.

#### 8.15 FURTHER CAPITAL REQUIREMENTS

Although the Directors believe that, on completion of the Offer, the Company will have sufficient capital to carry out its stated business objectives, there can be no assurance that such objectives can be met without further financing or, if further financing is necessary, that it can be obtained on favourable terms or at all.

#### 8.16 MARKET FLUCTUATIONS – PRICE AND LIQUIDITY FOR SHARES

Advanced Nano's business is a start-up business which intends to utilise nanomaterials and nanotechnology, possibly in conjunction with traditional technologies, in providing products and services to its customers.

An investment in Shares should be regarded as speculative. The price of Shares can rise or fall and can be affected by a range of factors affecting stock markets generally, or industries in which Advanced Nano's business is operated. Those matters are often beyond the control of the Company. In addition, liquidity in the trading of Shares (whether on the ASX or otherwise) can be affected by a range of matters beyond the control of the Company. Further, there is no guarantee of any return in respect of an investment in Shares, whether a return by way of dividends or capital.

In particular, the price of many stocks listed on the ASX have, in recent times, been subject to large fluctuations, which, in some cases, may have been unrelated to the operating performance of the individual companies concerned. Such fluctuations may adversely affect the market price of Shares.

#### 8.17 TAX LOSSES

Tax losses generated by Advanced Nano or its Subsidiaries may be carried forward and offset against future taxable income generated provided the tests of deductibility are satisfied. The tests that must be met to carry forward and utilise tax losses are the continuity of ownership test or the same business test.

There can be no guarantee that the losses incurred by Advanced Nano or its Subsidiaries will be able to be carried forward and offset against future income.

#### 8.18 RELIANCE ON TECHNOLOGY PERFORMANCE

Advanced Nano is dependent on the computer and other information technology hardware and software that it utilises. This computer equipment, software and other systems may not perform to specification. Performance failures of any of these components may significantly and adversely affect the Company's business.

#### 8.19 BUSINESS INTERRUPTION

Computer viruses, fire and other natural disasters, break-ins, theft, civil unrest, war and terrorism could lead to delays or cessation in the delivery of products or services to the customers of Advanced Nano and, accordingly, may adversely affect the Company's revenues and profitability.

#### 8.20 CURRENCY EXCHANGE RATES

The financial position of the Company is affected by movements in exchange rates. Adverse movements in currency exchange rates have the potential to reduce investment returns. Advanced Nano does not have, but may in future take out, hedging in respect of any currency exchange rates risk.

#### 8.21 DEPENDENCE ON DISTRIBUTORS

The business of Advanced Nano is based on relationships throughout the world with a number of arms length distributors. A significant proportion of Advanced Nano's future revenues and profits are expected to be generated through those distribution arrangements. Advanced Nano's operations are, as a result, dependent on those distributors continuing and, wherever practicable, improving their effectiveness in their respective markets. However, not all of Advanced Nano's distribution arrangements contain minimum sales commitments from those distributors.

#### 8.22 BUSINESS CONTRACT RISKS

There are a number of existing contracts that are material to Advanced Nano's business (refer Section 11.4). Further contracts will likely be entered into by the Company that will also be material to the Company's business.

Many of these contracts are, or will be, governed by laws other than laws of Australia. There may be difficulties in enforcing contracts in jurisdictions other than Australia. Apart from the usual vicissitudes of litigation, there may be regulatory or practical considerations that frustrate the enforceability, or enforcement, of such contracts against foreign or foreign-owned counterparties. These matters may have a significant adverse effect on the Company's ability to collect payments and otherwise to enforce its contracts, and may have a significant adverse effect more generally on Advanced Nano's business and profitability.

Apart from that, the business dealings of Advanced Nano are necessarily exposed to the potential of third party insolvency. If a third party with whom the Company has dealings becomes insolvent, this may also have a significant adverse effect on the Company and on its business and profitability. It should be noted that foreign insolvency laws are not necessarily similar to Australian insolvency laws.



### 8.23 TERMINATION OF MATERIAL CONTRACTS

There are a number of existing contracts that are material to Advanced Nano's business (refer Section 11.4). Further contracts will likely be entered into by the Company that will also be material to the Company's business.

Expiry or termination of these contracts, for any reason, may have a significant adverse impact on the business, revenues and profitability of Advanced Nano.

### 8.24 LITIGATION RISKS

If Advanced Nano fails to meet its contractual commitments, it may be exposed to litigation that may have a material adverse effect on its financial position. This is particularly the case in more litigious jurisdictions in which Advanced Nano carries on business.

### 8.25 FORCE MAJEURE RISK

Force majeure is the term generally used to refer to an event beyond the control of a party claiming that the event has occurred, including acts of God, fire, flood, earthquakes, war and strikes. Advanced Nano does not have insurance for all force majeure risks, some of which are, in any event, uninsurable. To the extent that any such risks occur, there may be adverse effects on the operations and profitability of Advanced Nano's business.

Section Nine

# INDEPENDENT ACCOUNTANT'S REPORT

*Image above: Alumina Platelets*

# INDEPENDENT ACCOUNTANT'S REPORT

## MOORE STEPHENS WI CHARTERED ACCOUNTANTS

10 January 2005

The Directors  
Advanced Nanotechnology Limited  
112 Radium Street  
WELSHPOOL WA 6106

### INDEPENDENT ACCOUNTANTS' REPORT ON HISTORICAL FINANCIAL INFORMATION

#### INTRODUCTION

This report has been prepared by Moore Stephens WI Pty Limited for inclusion in the Prospectus dated 10 January 2005.

The Directors of Advanced Nanotechnology Limited propose to utilise the proceeds of the Offer to fund working capital requirements, fund the expansion of Advanced Nano's nanopowder manufacturing facilities, fund the development of new nanopowder products, fund the expansion of Advanced Nano's business development activities in national and international markets and meet the costs of the Offer. The Offer has been fully underwritten by KTM Capital Pty Limited, refer to Sections 3.12 and 11.4.5 of the Prospectus.

Expressions defined in the Prospectus have the same meaning in this report.

#### BACKGROUND

Advanced Nanotechnology Limited ("Advanced Nano") was incorporated in Australia as a proprietary company on 25 August 1997, under the name Advanced Powder Technology Pty Ltd. It changed its name to Advanced Nanotechnology Pty Limited on 21 June 2004 and converted to a public company on 13 August 2004.

The business of the Company is conducted by Advanced Nano and its subsidiary, Advanced Nano Technologies Pty Ltd ("ANT").

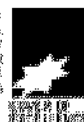
ANT was formed as a company owned equally by Advanced Nano and Samsung Corning Co. Ltd. of the Republic of Korea ("Samsung Corning") on 19 May 2000 to commercially develop the patented mechanochemical process (MCP™) nanopowder technology. ANT and Samsung Corning have executed several agreements to provide for ANT to buy-back Samsung Corning's shares in ANT for consideration of cash and co-ownership of ANT's intellectual property in relation to the MCP™ nanopowder manufacturing technology (refer Section 11.4.4 of the Prospectus). Upon completion of these transactions, Advanced Nano will obtain control by virtue of owning 100% of the issued capital of ANT.

#### FINANCIAL INFORMATION

The Directors of Advanced Nano have determined that the pro-forma financial information presented in Appendices 1 to 4 of this report is the most relevant to potential investors and accordingly comprises balances and results of Advanced Nano and its controlled entity (the "Advanced Nano Group").

Moore Stephens WI Pty Limited ABN 34 098 199 118  
AFS Licence No. 236886  
CML Building, Level 5, 14 Martin Place, Sydney NSW 2000 AUSTRALIA  
Tel: +61 2 9229 7999 Fax: +61 2 9233 4636 Web: [www.mswi.com.au](http://www.mswi.com.au)  
A Member of Moore Stephens International Limited Group of Independent Firms

Moore Stephens WI Pty Limited is a member of the  
Moore Stephens International Limited Group of Independent Firms  
Chartered Accountants  
Australia



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The pro-forma financial information set out in Appendices 1 to 4 of this report includes:

- Appendix 1 – The Pro-forma Consolidated Statement of Financial Performance of the Advanced Nano Group for the financial years ended 30 June 2003 and 30 June 2004 pre capital raising;
- Appendix 2 – The Pro-forma Consolidated Statement of Financial Position of the Advanced Nano Group as at 30 June 2004 post capital raising;
- Appendix 3 – The Pro-forma Consolidated Statement of Cash Flows of the Advanced Nano Group for the years ended 30 June 2003 and 30 June 2004 pre capital raising; and
- Appendix 4 – The details of the methodology applied in preparing the pro-forma financial information and significant accounting policies adopted and disclosed by the Advanced Nano Group.

#### PRO-FORMA HISTORICAL FINANCIAL INFORMATION

The historical financial information contained in the abovementioned Appendices to this report have been prepared by the Directors in accordance with the recognition and measurement principals prescribed in the Accounting Standards, Urgent Issues Group Consensus Views, other authoritative pronouncements of the Australian Accounting Standards Board and the Corporations Act 2001, modified for certain presentation matters for the purpose of inclusion in the Prospectus. The significant accounting policies adopted by the Company are summarised in Note 3 of Appendix 4.

The pro-forma historical financial information has been derived from the financial statements of Advanced Nano and ANT for the years ended 30 June 2003 and 30 June 2004 prepared by the Directors of the Advanced Nano Group and audited by the Auditor General (Advanced Nano) and PricewaterhouseCoopers (ANT).

The Auditor General issued a qualified audit opinion on the going concern in respect to the historical financial statements of Advanced Nano for the year ended 30 June 2003 due to uncertainty over future funding and an unqualified audit opinion for the year ended 30 June 2004.

PricewaterhouseCoopers issued an unqualified audit opinion in respect of the historical financial statements of ANT for the years ended 30 June 2003 and 30 June 2004.

#### PRO-FORMA CONSOLIDATION OF FINANCIAL INFORMATION

In the 30 June 2003 and 30 June 2004 audited financial statements of Advanced Nano, its interest in ANT is equity accounted as Advanced Nano did not have control of ANT. In January 2005 Advanced Nano obtained control by virtue of owning 100% of the issued capital of ANT subsequent to ANT's buy-back of ANT shares held by Samsung Corning.

To illustrate the financial effect on the group of Advanced Nano having control of ANT, the pro-forma historical financial information has been adjusted to include ANT as a 100% owned subsidiary for the years ended 30 June 2003 and 30 June 2004.

The pro-forma consolidated statement of financial position for the Advanced Nano Group as at 30 June 2004, as disclosed in Appendix 2, assumes ANT bought back the shares held in ANT by Samsung Corning at 30 June 2004 and Advanced Nano gained control of and consolidates ANT as at that date. It further assumes the inclusion of the August 2004 capital raising and completion of the Offer provided for in this Prospectus.

The pro-forma consolidated statement of financial performance and consolidated statement of cash flows for the Advanced Nano Group, as disclosed in Appendices 1 and 3, have been prepared on the basis outlined in Appendix 4 as if Advanced Nano had controlled ANT since 1 July 2002. There is no goodwill or discount on consolidation and accordingly there is no amortisation of goodwill on consolidation.

All intercompany balances and transactions between entities in the Advanced Nano Group have been eliminated on consolidation.

No other adjustments have been made to the historical financial information included in the pro-forma financial information contained in the Appendices to this report other than the elimination of material non-recurring grant revenue and grant cash receipts as disclosed in Appendix 4.

#### SCOPE

You have requested Moore Stephens WI Pty Limited to prepare a report covering the following information:

- a) The pro-forma consolidated statement of financial position and related notes of the Advanced Nano Group as at 30 June 2004 post capital raising, which assumes completion of the Offer; and
- b) The pro-forma consolidated statement of financial performance and statement of cash flows, and related notes of the Advanced Nano Group for the years ended 30 June 2003 and 30 June 2004.

#### REVIEW OF PRO-FORMA FINANCIAL INFORMATION

Moore Stephens WI Pty Limited has conducted an independent review of the pro-forma financial information included in the Appendices to this report in order to state whether, on the basis of the procedures described, anything has come to our attention that would indicate that the pro-forma historical financial information is not presented fairly:

- On the basis of the underlying audited financial statements for the financial years ended 30 June 2003 and 30 June 2004;
- On the basis of the methodology described in Appendix 4;
- In accordance with the recognition and measurement principals prescribed in the Accounting Standards, Urgent Issues Group Consensus Views, other authoritative pronouncements of the Australian Accounting Standards Board and the Corporations Act 2001, modified for certain presentation matters for the purpose of inclusion in the Prospectus; and
- In accordance with the methodology applied in preparing the pro-forma financial information and significant accounting policies adopted and summarised in the notes set out in Appendix 4.

Our review has been conducted in accordance with Australian Auditing Standard AUS902 "Review of Financial Reports". We have made such enquiries and performed such procedures as we, in our professional judgement, considered reasonable in the circumstances, which was limited primarily to:

- Review of relevant working papers detailing the adjustments and the assumptions on which they were made, accounting records and other documentation, as appropriate;

**MOORE STEPHENS WI**  
CHARTERED ACCOUNTANTS

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- A review of adjustments made to the pro-forma statement of financial position, statement of financial performance and statement of cash flows;
- Consideration of the consistency in application of the recognition and measurement principles prescribed in the Accounting Standards, Urgent Issues Group Consensus Views, other authoritative pronouncements of the Australian Accounting Standards Board and the Corporations Act 2001; and
- An enquiry of Advanced Nano Directors, management and others.

The procedures do not provide all the evidence that would be required in an audit, thus the level of assurance provided is less than that given in an audit. We have not performed an audit and, accordingly, we do not express an audit opinion.

The Directors of Advanced Nano are responsible for the pro-forma historical financial information included in the Appendices to this report.

#### REVIEW STATEMENT ON PRO-FORMA HISTORICAL FINANCIAL INFORMATION

Based on our review, which is not an audit, nothing has come to our attention which would cause us to believe that the pro-forma historical information of the Advanced Nano Group as set out in Appendices 1 to 4 of this report is not drawn up so as to present fairly the pro-forma statement of financial position, statement of financial performance, statement of cash flows and related notes:

- On the basis of the methodology applied in preparing the pro-forma financial information, as set out in Note 1 of Appendix 4 to this report;
- In accordance with the recognition and measurement principles prescribed in the Accounting Standards, Urgent Issues Group Consensus Views, other authoritative pronouncements of the Australian Accounting Standards Board and Corporations Act 2001; and
- In accordance with the significant accounting policies of the Advanced Nano Group as set out in Appendix 4 to this report.

#### LEGAL PROCEEDINGS

To the best of Moore Stephens WI Pty Limited's knowledge and belief, there are no material legal proceedings outstanding or currently being undertaken not otherwise disclosed in this report which would cause the information included in the report to be misleading.

#### SUBSEQUENT EVENTS

On 4 August 2004, Advanced Nano was effectively released from the cross guarantee provided to Vitrostone Limited, a director related company, following Vitrostone's repayment of the chattel mortgage.

On 25 August 2004, Advanced Nano raised additional capital of \$2,000,721 through the issue of new Shares as part of a private placement. Share placement costs of \$100,611 were incurred in relation to this issue.

Pursuant to a resolution of shareholders, on 4 November 2004, Advanced Nano underwent a capital reconstruction such that each Ordinary Share on issue was converted into 3,531.157 Ordinary Shares and Options.

ANT and Samsung Corning have executed several agreements to provide for ANT to buy-back Samsung Corning's shares in ANT for consideration of cash and to establish co-ownership of ANT's intellectual property in relation to the MCP™ nanopowder manufacturing technology (refer Section 11.4.4 of the Prospectus).

#### DIRECTORS' FORECASTS

The Directors are not making any forecasts for earnings by Advanced Nano.

#### INDEPENDENCE

Other than a fee for the preparation of this report no pecuniary or other benefit, direct or indirect, has been received by Moore Stephens WI Pty Limited for or in connection with the making of this report.

#### DECLARATIONS

Moore Stephens WI Pty Limited has prepared this report for inclusion in the Prospectus. This report does not address the rights attaching to the securities to be issued in accordance with the Prospectus, nor the risks associated with the investment. Moore Stephens WI Pty Limited has not been requested to consider the prospects of Advanced Nano or ANT, the securities or offer and related pricing issues, nor the merits and risk associated with becoming a shareholder, and accordingly, has not done so nor purports to do so. We have not acted in any other capacity in relation to the Prospectus, and have not been involved in the preparation of any part thereof. Responsibility is disclaimed for any information or details set out elsewhere in or omitted from this Prospectus.

This report has been prepared on behalf of Moore Stephens WI Pty Limited by Scott Melville Whiddett, who is a Director of Moore Stephens WI Pty Limited and Partner of Moore Stephens WI Chartered Accountants. Mr Whiddett is an associate of the Institute of Chartered Accountants and a Registered Company Auditor. Mr Whiddett has over thirteen years of experience including audit of public companies, detection of fraud, performance of valuations, economic loss calculations, due diligence and the preparation of Independent Expert's Reports.

Mr Whiddett, the other Directors, Partners and the staff involved with the preparation of this report have, at the date of this report, no interest or financial relationship with Advanced Nano.

Yours faithfully,

*Moore Stephens W.I.*

**MOORE STEPHENS WI PTY LIMITED**

*Scott Whiddett*

**SCOTT WHIDDETT**

Director

APPENDIX 1

**MOORE STEPHENS WI**  
 CHARTERED ACCOUNTANTS

PRO-FORMA CONSOLIDATED STATEMENT OF FINANCIAL PERFORMANCE  
 For the years ended 30 June 2004 and 30 June 2003

The pro-forma consolidated statement of financial performance is to be read in conjunction with the accompanying notes set out in Appendix 4.

	2004	2003
	Pre Capital Raising \$'000	Pre Capital Raising \$'000
Revenues from ordinary activities	1,116	662
Changes in inventories of finished goods and work in progress	175	(335)
Employee expenses	(1,769)	(1,867)
Depreciation and amortisation expenses	(1,152)	(822)
Research and development expenses	(772)	(686)
Insurance expenses	(97)	(46)
Consultancy expenses	(482)	(133)
Provision for doubtful debts	57	(106)
Advertising expenses	(32)	(108)
Travel and accommodation expenses	(104)	(136)
Equipment rental expenses	(36)	(77)
Borrowing costs expenses	(214)	(106)
Other expenses from ordinary activities	(779)	(654)
<b>Operating (loss) before tax</b>	<b>(4,089)</b>	<b>(4,414)</b>
Tax expense	—	—
<b>Net (loss) after tax</b>	<b>(4,089)</b>	<b>(4,414)</b>



PRO-FORMA CONSOLIDATED STATEMENT OF FINANCIAL POSITION  
*As at 30 June 2004*

The pro-forma consolidated statement of financial position is to be read in conjunction with the accompanying notes set out in Appendix 4.

	Notes	2004 Post: Capital Raising \$'000
<b>CURRENT ASSETS</b>		
Cash assets		12,587
Receivables	4	200
Inventories	5	160
Other assets		89
<b>TOTAL CURRENT ASSETS</b>		<b>13,036</b>
<b>NON-CURRENT ASSETS</b>		
Cash assets		167
Property, plant and equipment	6	699
Intangible assets	7	6,471
<b>TOTAL NON-CURRENT ASSETS</b>		<b>7,337</b>
<b>TOTAL ASSETS</b>		<b>20,373</b>
<b>CURRENT LIABILITIES</b>		
Payables		334
Interest bearing liabilities	8	33
Provisions		178
Other liabilities	9	549
<b>TOTAL CURRENT LIABILITIES</b>		<b>1,094</b>
<b>NON-CURRENT LIABILITIES</b>		
Interest bearing liabilities	8	279
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>279</b>
<b>TOTAL LIABILITIES</b>		<b>1,373</b>
<b>NET ASSETS</b>		<b>19,000</b>
<b>EQUITY</b>		
Contributed equity	10	27,806
Retained earnings		(8,806)
<b>TOTAL EQUITY</b>		<b>19,000</b>

## APPENDIX 3

**MOORE STEPHENS WI**  
 CHARTERED ACCOUNTANTS

**PRO-FORMA CONSOLIDATED STATEMENT OF CASH FLOWS**  
*For the years ended 30 June 2004 and 30 June 2003*

The pro-forma consolidated statement of cash flows is to be read in conjunction with the accompanying notes set out in Appendix 4.

	2004	2003
	Pre Capital Raising \$'000	Pre Capital Raising \$'000
<b>CASH FLOWS FROM OPERATING ACTIVITIES</b>		
Receipts from customers	897	162
Payments to suppliers and employees	(3,803)	(3,803)
Interest received	99	158
Grant received	36	—
Borrowing costs	(2)	—
<b>Net cash (used in) operating activities</b>	<b>(2,773)</b>	<b>(3,483)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>		
Payment for property, plant and equipment	(347)	(440)
Payment for patents and trademarks	(46)	(99)
Payment for licences	62	—
Loan (to)/repayment from related parties	250	(250)
Proceeds from sale of property, plant and equipment	—	1
Recoupment of GST on purchase of licence	—	81
Payment for security deposit	(167)	—
<b>Net cash (used in) investing activities</b>	<b>(248)</b>	<b>(707)</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>		
Proceeds from issue of shares and other securities	2,700	2,000
Share issue costs	(106)	—
Chattel mortgage finance	243	68
<b>Net cash provided by financing activities</b>	<b>2,837</b>	<b>2,068</b>
Net (decrease) in cash held	(184)	(2,122)
Cash at the beginning of the financial year	2,007	4,129
<b>Cash at the end of the financial year</b>	<b>1,823</b>	<b>2,007</b>

**NOTE 1: BASIS OF PREPARATION**

The pro-forma consolidated statement of financial performance, statement of financial position and statement of cash flows have been prepared on the basis of the following methodology:

**30 June 2003 and 30 June 2004 pre capital raising**

The pro-forma consolidated statement of financial performance, statement of cash flows and related notes have been derived as follows:

- The actual financial statements of Advanced Nano and ANT for the years ended 30 June 2003 and 30 June 2004 prepared by the Directors of Advanced Nano and ANT and audited by the Auditor General (Advanced Nano) and PricewaterhouseCoopers (ANT).
- No material adjustments have been made to the historical actual balances and results of Advanced Nano for the years ended 30 June 2003 and 30 June 2004 with the exception of:
  - (i) removing the share of ANT losses equity accounted;
  - (ii) elimination adjustments with respect to intercompany transactions on consolidation of ANT; and
  - (iii) adjustment for non-recurring grant revenue and grant cash receipts. (Refer to Note 2 (a) and (c) of this Appendix).
- No adjustment has been made for the additional costs associated with being a listed company.

**30 June 2004 post capital raising**

- The 30 June 2004 post capital raising pro-forma consolidated statement of financial position has been derived from the actual financial statements of Advanced Nano and ANT and audited by the Auditor General (Advanced Nano) and PricewaterhouseCoopers (ANT) for the year ended 30 June 2004.
- Inclusion of the effect of the following adjustments:
  - (i) the proceeds from the issue of 45 million ordinary \$0.20 shares (i.e. \$9 million);
  - (ii) the payment of anticipated capital raising expenses of \$690,000 (excluding GST);
  - (iii) the proceeds of additional capital raising in August 2004 of \$2,000,721, related capital raising expenses of \$100,611, and the associated GST effect; and
  - (iv) consolidation elimination entries and other adjustments as a consequence of the ANT share buy-back (refer Section 11.4.4);
- No adjustment has been made for the additional costs associated with being a listed company, other than the costs associated with being admitted to the Australian Stock Exchange.

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### NOTE 2: RECONCILIATION OF AUDITED FINANCIAL STATEMENTS TO PRO-FORMA FINANCIAL STATEMENTS

#### (a) Pro-forma Statement of Financial Performance

The following table provides a reconciliation between the revenue and net profit after tax as contained in the audited statutory financial statements and the revenue and net profit after tax contained in the pro-forma statement of financial performance set out in Appendix 1.

	Note	2004 \$'000	2003 \$'000
<b>Revenue Reconciliation</b>			
Revenue of Advanced Nano per audited statutory financial statements		1,005	551
Revenue of ANT per audited financial statements		1,456	1,923
Elimination of intercompany transactions on consolidation	(i)	(328)	(945)
Reversal of non-recurring grant revenue	(ii)	(1,017)	(867)
<b>Pro-forma revenue</b>		<b>1,116</b>	<b>662</b>
<b>Net Profit After Tax (NPAT) Reconciliation</b>			
NPAT of Advanced Nano per audited statutory financial statements		(2,285)	(2,388)
NPAT of ANT per audited financial statements		(1,603)	(1,463)
Reversal of equity accounting of ANT losses	(iii)	802	1,137
Elimination of intercompany transactions on consolidation	(i)	14	(833)
Reversal of non-recurring grant revenue	(ii)	(1,017)	(867)
<b>Pro-forma Net Profit/(Loss) After Tax</b>		<b>(4,089)</b>	<b>(4,414)</b>

Notes:

- (i) The adjustment relates to the elimination of intercompany transactions between Advanced Nano and ANT during the years ended 30 June 2003 and 30 June 2004. This adjustment does not correspond to the elimination adjustment per the pro-forma statement of financial position due to the different time period shown in Note 2(b).
- (ii) Material non-recurring grant revenue has been eliminated in preparing the pro-forma statement of financial performance.
- (iii) The pro-forma statement of financial performance have been adjusted to include ANT as a 100% owned subsidiary for the years ended 30 June 2003 and 30 June 2004.

**(b) Pro-forma Statement of Financial Position**

The following table provides a reconciliation between the net assets as contained in the audited statutory financial statements and the net assets contained in the pro-forma statement of financial position set out in Appendix 2.

	Note	2004 \$'000
<b>Net Assets Reconciliation</b>		
Net assets of Advanced Nano per audited statutory financial statements		9,633
Net assets of ANT per audited financial statements		5,552
ANT share buy-back adjustment	(i)	(3,286)
Elimination of intercompany transactions on consolidation	(ii)	(3,109)
Capital raising net of costs	(iii)	10,210
<b>Pro-forma net assets</b>		<b>19,000</b>
Intangible assets of Advanced Nano per audited statutory financial statements		(4,900)
Intangible assets of ANT per audited financial statements		(4,560)
Elimination of intercompany transactions on consolidation	(ii)	739
Intellectual property of ANT eliminated as part of share buy-back	(iv)	2,250
<b>Pro-forma net tangible assets</b>		<b>12,529</b>

Notes:

- (i) This adjustment reflects the impact of ANT's buy-back of Samsung Corning's 50% interest in ANT in accordance with the Share Buy-Back Agreement.
- (ii) The adjustment relates to the elimination of intercompany balances between Advanced Nano and ANT as at 30 June 2004.
- (iii) This adjustment includes the August 2004 private placement (\$2,000,721 less issue costs of \$100,611) and the Offer provided for in this Prospectus (\$9,000,000 less issue costs of \$690,000).
- (iv) Represents the 50% share of ANT's intellectual property co-owned by Samsung Corning in accordance with the Assignment Agreement.

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### (c) Pro-forma Consolidated Statement of Cash Flows

The following table provides a reconciliation between the net cash used in operating activities and net cash movements as contained in the audited statutory financial statements and the cash used in operating activities and net cash movements contained in the pro-forma consolidated statement of cash flows as set out in Appendix 3.

	Note	2004 \$'000	2003 \$'000
<b>Net Operating Cash Flows Reconciliation</b>			
Net cash used in operating activities by Advanced Nano per audited statutory financial statements		(744)	(652)
Net cash used in operating activities by ANT per audited financial statements		(825)	(1,565)
Elimination of intercompany transactions on consolidation	(i)	(803)	—
Reversal of non-recurring grant cash receipts	(ii)	(401)	(1,268)
<b>Pro-forma Net Cash (Used in) Operating Activities</b>		<b>(2,773)</b>	<b>(3,483)</b>
<b>Net Cash Movements Reconciliation</b>			
Net cash movements of Advanced Nano per audited statutory financial statements		1,072	809
Net cash movements of ANT per audited financial statements		(855)	(1,663)
Reversal of non-recurring grant cash receipts	(ii)	(401)	(1,268)
<b>Pro-forma Net Cash Movements</b>		<b>(184)</b>	<b>(2,122)</b>

Notes:

- (i) The adjustment relates to intercompany transactions between Advanced Nano and ANT during the years ended 30 June 2003 and 30 June 2004.
- (ii) Material non-recurring grant cash receipts have been eliminated in preparing the pro-forma statement of cash flows.

**NOTE 3: STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES**

The financial report is a general purpose financial report that has been prepared in accordance with the Accounting Standards, Urgent Issues Group Consensus Views, other authoritative pronouncements of the Australian Accounting Standards Board and the Corporations Act 2001, as modified for certain presentation matters for the purpose of inclusion in the Prospectus.

The financial report covers the economic entity of Advanced Nano and its controlled entity, ANT.

Advanced Nano is a public company, incorporated and domiciled in Australia.

The financial report has been prepared on an accruals basis and is based on historical costs and does not take into account changing money values or, except where stated, current valuations of non-current assets. Cost is based on the fair values of the consideration given in exchange for assets.

The following is a summary of the significant accounting policies adopted by Advanced Nano in the preparation of the financial report. The accounting policies have been consistently applied, unless otherwise stated.

**a) Principles of Consolidation**

A controlled entity is any entity controlled by Advanced Nano. Control exists where Advanced Nano has the capacity to dominate the decision-making in relation to the financial and operating policies of another entity so that the other entity operates with Advanced Nano to achieve the objectives of Advanced Nano.

All intercompany balances and transactions between entities in the economic entity, including any unrealised profits or losses, have been eliminated on consolidation.

**b) Income Tax**

Tax effect accounting procedures are followed whereby the income tax expense in the statement of financial performance is matched with the accounting profit after allowing for permanent differences. The future tax benefit relating to tax losses is not carried forward as an asset unless the benefit is virtually certain of realisation. Income tax on cumulative timing differences is set aside to the deferred income tax or the future income tax benefit accounts at the rates which are expected to apply when those timing differences reverse.

**c) Goods and Services Tax**

Revenue, expenses and assets are recognised net of the amount of GST except:

- (i) where the GST incurred on a purchase of goods and services is not recoverable from the taxation authority, in which case the GST is recognised as part of the cost of acquisition of the asset or as part of the expense item as applicable; and
- (ii) receivables and payables are stated with the amount of GST included.

The net amount of GST recoverable from, or payable to, the taxation authority is included as part of receivables or payables in the statement of financial position.

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Cash flows are included in the statement of cash flows on a gross basis and the GST component of cash flows arising from investing and financing activities, which is recoverable from, or payable to, the taxation authority are classified as operating cash flows. Commitments and contingencies are disclosed net of the amount of GST recoverable from, or payable to, the taxation authority.

**d) Cash**

For the purpose of the statement of cash flows, cash includes deposits at call with financial institutions and other highly liquid investments with short periods to maturity which are readily convertible to cash on hand and are subject to an insignificant risk of changes in value, net of outstanding bank overdrafts.

**e) Revenue**

Amounts disclosed as revenue are net of returns, trade allowances and duties and taxes paid. Revenue is recognised for the major business activities as follows:

*Services*

Service revenue is recognised when the service is provided.

*Export Market Development Grant*

Revenue is recognised when the economic entity has control of the right to receive the grant payment.

*Other*

A sale is recorded when goods have been dispatched to a customer pursuant to a sales order and the associated risks have been passed to the carrier or customer.

**f) Inventories**

Inventories are valued at the lower of cost and net realisable value. Costs incurred in bringing each product to its present location and condition are accounted for as follows:

(iii) raw materials – purchase cost on a first-in-first-out basis; and

(iv) finished goods and work in progress – cost of direct material and labour and a proportion of manufacturing overheads based on normal operating capacity.

**g) Acquisition of Assets**

The purchase method of accounting is used for all acquisitions of assets regardless of whether equity instruments or other assets are acquired. Cost is determined as the fair value of the assets given up, shares issued or liabilities undertaken at the date of acquisition plus incidental costs directly attributable to the acquisition. Where equity instruments are issued in an acquisition, the value of the instruments is their fair value as at the acquisition date. Transaction costs arising on the issue of equity instruments are recognised directly in equity.

**h) Recoverable Amount of Non Current Assets**

The recoverable amount of an asset is the net amount expected to be recovered through the cash inflows and outflows arising from its continued use and subsequent disposal.



Where the carrying amount of a non-current asset is greater than its recoverable amount, the asset is written down to its recoverable amount. Where net cash inflows are derived from a group of assets working together, recoverable amount is determined on the basis of the relevant group of assets. The decrement in the carrying amount is recognised as an expense in net profit or loss in the reporting period in which the recoverable amount write down occurs.

The expected net cash flows included in determining the recoverable amounts of non-current assets are not discounted.

**i) Intangible Assets and Expenditure Carried Forward**

*Intellectual property rights*

The cost of acquiring intellectual property rights (copyright) is carried at cost and amortised on a straight-line basis over 16.24 years, being the remaining useful life from the date of transfer.

*Patents and trademarks*

Costs incurred for the preparation, application and registration of patents and trademarks (including patent attorney fees) are carried at cost and amortised on a straight-line basis from the application date over the remaining useful life of the patent or trademark, being up to 20 or 10 years respectively. If the patent or trademark is not granted, lapses or is abandoned, any capitalised cost is expensed when known. The costs associated with annual renewal fees are expensed as incurred.

**j) Depreciation of Property, Plant and Equipment**

Depreciation is calculated on a straight line basis to write off the net cost or revalued amount of each item of property, plant and equipment over its expected useful life to the entity. Estimates of remaining useful lives are made on a regular basis for all assets, with annual reassessments for major items. The expected useful lives are as follows:

<i>Category</i>	<i>Useful Life</i>
Plant and equipment	5-15 years

Where items of plant and equipment have separately identifiable components which are subject to regular replacements, those components are assigned useful lives distinct from the item of plant and equipment to which they relate.

Major spares purchased specifically for particular plant are capitalised and depreciated on the same basis as the plan to which they relate.

**k) Employee Benefits**

*Wages and salaries, annual leave and sick leave*

Liabilities for wages and salaries, including non-monetary benefits, annual leave and accumulating sick leave expected to be settled within 12 months of the reporting date are recognised in other creditors in respect of employees' services up to the reporting date and are measured at the amounts expected to be paid when the liabilities are settled. Liabilities for non-accumulating sick leave are recognised when the leave is taken and measured at the rates paid or payable.

***Superannuation***

Contributions to employees superannuation funds made by the company are charged to the statement of financial performance in the period in which the contributions are payable.

***Employee benefit on-costs***

Employee benefit on-costs, including payroll tax, are recognised and included in employee benefit liabilities and costs when the employee benefits to which they relate are recognised as liabilities.

***Equity-based compensation benefits***

The value of equity-based compensation benefits provided to employees via the Advanced Nanotechnology Limited Employee Option Plan are not being recognised as an employee benefits expense.

**l) Foreign Currency**

Foreign currency transactions are initially translated into Australian currency at the rate of exchange at the date of the transaction. At balance date amounts payable and receivable in foreign currencies are translated to Australian currency at rates of exchange current at that date. Resulting exchange differences are recognised in determining the profit or loss for the year.

**m) Adoption of International Financial Reporting Standards**

Significant differences exist between Australian Generally Accepted Accounting Principles (AGAAP) and International Financial Reporting Standards (IFRS). Advanced Nano will be required to comply with IFRS for the financial reporting period beginning 1 July 2005. Conversion to IFRS will result in many changes to accounting policies and therefore will impact on the financial performance and position of Advanced Nano.

Advanced Nano has not quantified the potential impact on financial performance and the financial position of adopting IFRS, however, the key potential implications for Advanced Nano of conversion to IFRS are understood to be as follows. Please note that there may be additional changes however their impact at present is not currently expected to be material:

***Impairment of Assets***

- AASB 136 "Impairment of Assets" sets out more stringent requirements for the assessment of the carrying values of assets than those currently imposed by existing AGAAP. Specifically, where there is an indication of impairment of an asset, the recoverable amount of the asset must be calculated and compared to the carrying value of the asset (other than for goodwill and indefinite-lived intangible assets, which must be assessed at each reporting date). Recoverable amount is defined as the higher of fair value less costs to sell and value in use. Value in use is calculated as the present value of the future cash flows expected to be derived from an asset. Currently, AGAAP does not require the use of discounted cash flows in the determination of recoverable amount.

- To the extent that assets (tangible and intangible) are carried at amounts in excess of their recoverable amounts, as defined under AASB 136, and this impairment is not currently required to be recognised under AGAAP, an impairment charge will be required upon transition to IFRS.

***Intangible Assets***

- AASB 138 Intangible Assets sets out many factors for consideration when determining useful life of an intangible asset. This approach is more stringent than that required under existing AGAAP. Currently intellectual property rights, patents and trademarks are being amortised in accordance with the Company's accounting policy as set out in Note 3(i) above.
- To the extent that an ongoing assessment indicates that the current useful life does not meet with consideration of the factors noted in AASB 138, then the useful life will be adjusted accordingly.

***Provisions for Decommissioning and/or Land Decontamination***

- AASB 137 "Provisions, Contingent Liabilities and Contingent Assets" requires that a provision, being a liability of uncertain timing or amount, be recognised when the following conditions are met:
  - an entity has a present obligation (legal or constructive) as a result of a past event;
  - it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and
  - a reliable estimate can be made of the amount of the obligation.
- To the extent that Advanced Nano and/or ANT have an obligation to decommission and remove the existing plant and/or remediate the Welshpool site, whether imposed by legislation or created by published or expected practice, AASB 137 will operate to require a provision for the expected costs to be recognised.
- This provision is calculated as the present value of the expected costs to be incurred in decommissioning/remediation, using the today's costs (i.e. future technology ignored), inflated to the period during which the outflow of economic benefits are expected to occur. On initial recognition, an amount equal to the provision is added to the carrying value of plant and equipment. This amount is amortised on the same basis and over the same period as the plant and equipment, and an annual accretion charge (interest expense) is also recognised as the discount implicit in the present value of the decommission provision "unwinds".

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*Share-Based Payments*

- AASB 2 "Share Based Payments" will require entities to recognise the fair value of share-based payments, including options issued to employees and suppliers issued in return for the rendering of services, as expenses in the profit and loss account. AASB 1 First-time Adoption of Australian Equivalents to International Financial Reporting Standards sets out the transitional requirements for the accounting for share-based payments and requires that accounting and disclosure requirements must be applied to share-based payment transactions in which equity instruments were issued and vested after 7 November 2002. On this basis this would apply to employee share options granted from and including 28 November 2002, and options granted to KTM Capital Pty Limited as disclosed in the Prospectus.

*Government Grants*

- AASB 120 "Accounting for Government Grants and Disclosure of Government Assistance" requires that government grants received be recognised in income over periods necessary to match them with the related costs which they are intended to compensate, on a systematic basis. AASB 120 also operates to defer grant revenue received in respect of asset purchases (or grants of assets themselves). This deferred revenue is then recognised as income on a systematic basis over the life of the asset.
- This differs from the current AGAAP treatment, which requires grant revenue to be recognised when the following conditions exist:
  - the entity gains control of the contribution or the right to receive the contribution;
  - it is probable that the economic benefits comprising the contribution will flow to the entity; and
  - the amount of the contribution can be measured reliably.
- Adjustments to the transition date balance sheet at 30 June 2004 will be required if either of the three following circumstances exist:
  - government grants have been recognised as revenue prior to 30 June 2004, however, the costs to which they relate are to be incurred in a future period. In this instance, revenue should be de-recognised and deferred to the period in which costs will be incurred;
  - government grants for the acquisition of assets have been recognised immediately as revenue in prior periods, and the assets to which they relate remain on the balance sheet. In these instances, that portion of grant revenue relating to the unamortised balance of the asset will need to be de-recognised and deferred for recognition over the remaining useful life of the asset; or

- government grants for the acquisition of assets have been offset against the cost of acquisition of the asset. These assets will be required to be recognised retrospectively at their gross cost (i.e. excluding any grant offset) and depreciated in accordance with AASB 116. Grant revenue in respect of these assets will need to be deferred from the date on which the grant was received and recognised retrospectively in income systematically in accordance with the life of the related asset.

*Taxation*

- AASB 112 "Income Taxes" requires a fundamental change in the way in which income tax is accounted for, specifically, the measurement and recognition of deferred tax assets and liabilities. Current AGAAP utilises an "Income Statement" approach to calculate deferred taxation balances, whereas IFRS requires a "Balance Sheet" approach. This method entails a comparison of tax and accounting balance sheets to calculate any required adjustment to deferred taxation balances and will necessitate the determination of a tax balance sheet for the first time.
- The recognition criteria for deferred tax assets have also changed under AASB 112. Under current AGAAP, the benefits of future tax losses or timing differences must only be recognised when their realisation is beyond reasonable doubt, or in the cases of companies incurring tax losses, when their realisation is virtually certain. AASB 112 requires that realisation of future income tax benefits be probable in order for deferred tax assets to be realised.

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	2004
	Post Capital Raising \$'000
<b>NOTE 4: RECEIVABLES</b>	
Trade debtors	164
Less: provision for doubtful debts	(56)
Other debtors	92
	200
<b>NOTE 5: INVENTORIES</b>	
Raw materials	38
Work in progress	29
Finished goods	93
	160
<b>NOTE 6: PROPERTY, PLANT AND EQUIPMENT</b>	
Plant and equipment	1,046
Accumulated depreciation	(347)
	699
<b>NOTE 7: INTANGIBLE ASSETS</b>	
<i>Patents, trademarks and licences</i>	
At cost	6,197
Accumulated amortisation	(1,579)
	4,618
Impact of ANT transaction with Samsung Corning	(2,250)
	2,368
<i>Intellectual property rights</i>	
At cost	5,475
Accumulated amortisation	(1,372)
	4,103
Total intangible assets	6,471

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2004

Post-Capital  
Raising  
\$'000

NOTE 8: INTEREST BEARING LIABILITIES

*Current*

Secured – Chattel mortgage	33
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*Non-Current*

Secured – Chattel mortgage	279
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NOTE 9: OTHER LIABILITIES

Accrued expenses	211
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Accrued interest on convertible notes	277
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Deferred income	61
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549

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NOTE 10: CONTRIBUTED EQUITY

Issued capital	28,596
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Less: capital raising costs	(790)
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27,806

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Section Ten

# PATENT ATTORNEYS' REPORTS

*Image above: Zirconium Oxide Nano Rods*



# PATENT ATTORNEYS' REPORTS

## **GRIFFITH HACK** PATENT AND TRADE MARK ATTORNEYS

5 January 2005

The Directors  
Advanced Nanotechnology Limited  
112 Radium Street  
WELSHPOOL WA 6106

Dear Sirs

### **PATENT ATTORNEY REPORT**

**Our Ref: APM:KM:NH:GFO0217:GM4B817**

This Report has been prepared for inclusion in a Prospectus required for lodgement at the Australian Securities and Investments Commission for the purposes of raising funds through the issue of securities and to seek listing on the Australian Stock Exchange Limited.

The Report details the current status of granted patents and pending patent applications as well as the current status of registered trade marks and pending trade mark applications owned by Advanced Nano Technologies Pty Ltd ("ANT") and Advanced Nanotechnology Limited ("ANO") (formerly Advanced Powder Technology Pty Ltd).

For the purposes of this Prospectus we have been asked to provide a brief summary of the inventions disclosed in each patent family owned by ANT and ANO. These summaries appear below and are provided for general information purposes only. The summaries are not to be taken as definitive of the full subject matter disclosed in the patent applications nor representative of the scope of the claims of any of the granted patents or pending patent applications.

### **PATENT PORTFOLIO OF ANT**

ANT is the applicant and patentee in relation to pending patent applications and granted patents, respectively, in various countries in relation to four inventions, entitled:

- (a) Process for the Production of Metals, Alloys and Ceramic Materials;
- (b) Process for the Production of Ultrafine Particles;
- (c) Process for the Production of Ultrafine Powders; and
- (d) Process for the Production of Ultrafine Plate-like Alumina Particles.

Brief details of these inventions and their corresponding patents and patent applications follow.

#### **Process for the Production of Metals, Alloys and Ceramic Materials**

The patents for this invention provide protection for a method of producing a metal, alloy or ceramic material in which a mixture of reducible metal compounds and reducing agents is subjected to mechanical activation, especially by high energy ball milling to effect reduction and yield a metal or alloy powder. A non-metallic element or a compound may be included in the reaction mixture to react with the metal and yield a ceramic product. Other metals or a metalloid may equally be included in the mixture for incorporation into the product. Milling is preferably carried out in an inert or reducing atmosphere in the presence of a lubricant. The reducing agent may be calcium, magnesium or sodium, a liquid selected from lithium alkyls dissolved in hydrocarbon, alkali metal in liquid ammonia or a sodium potassium alloy or a gas selected from hydrogen, chlorine or carbon monoxide.

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Granted Patents	
Country	Patent No.
Australia	627822
Austria	0449890
Germany	68925734.1
France	0449890
Great Britain	0449890
Israel	92832
India	174113
Japan	3359030
South Korea	113668
New Zealand	231941
Singapore	9790672-1
South Africa	89/9850
USA	5,328,501

### Process for the Production of Ultrafine Particles

The patents and patent applications for this invention provide protection for a process for producing ultrafine particles based on a mechanically activated chemical reaction of a metal compound with a reagent. The process involves subjecting a mixture of a metal compound and the reagent to mechanical activation to increase the chemical reactivity of the reactants and/or increase the kinetics of a chemical reaction which results in the production of a solid nano-phase substance. During mechanical activation a composite structure is formed which consists of an intimate mixture of nano-sized grains of the nano-phase substance and the reaction by-product phase. A by-product phase is also formed. When the by-product phase is removed, the solid nano-phase substance is left behind in the form of ultrafine particles. The step of removing the by-product phase, following mechanical activation, may involve the addition of a solvent which dissolves the by-product phase but does not react with the solid nano-phase substance. The process may be used to form ultrafine metal particles as well as ultrafine particles of ceramics. One of the key advantages of the process is a significant degree of control over the size and size distribution of the ultrafine particles, and over the nature of interfaces created between the solid nano-phase substance and the reaction by-product phase.

Granted Patents	
Country	Patent No.
Australia	710739
Austria	E200236
Finland	0854765
France	0854765
Germany	69612390.8-08
Great Britain	0854765
Ireland	0854765
Italy	0854765
Netherlands	0854765
Singapore	P-51568
Sweden	0854765
USA	6,203,768

# GRIFFITH HACK

PATENT AND TRADE MARK ATTORNEYS

## Pending Patent Applications

Country	Application No.
Canada	2,230,443
Japan	509629/97

### Process for the Production of Ultrafine Powders

The patents and patent applications for this invention provide coverage for a process for the production of ultra-fine powders based on mechanical milling of two or more non-reacting powders. A suitable precursor metal compound and a non-reactant diluent phase are subjected to mechanical milling which through the process of mechanical activation reduces the microstructure of the mixture to form nano-sized grains of the precursor metal compound uniformly dispersed in a diluent phase. Heat treating the milled powder converts the nano-sized grains of the metal compound into a desired metal oxide phase. Alternatively, the metal compound may itself be an oxide phase which has the requisite milling properties to form nanograins when milled with a diluent. An ultrafine powder is produced by removing the diluent phase such that nano-sized grains of the desired metal oxide phase are left behind. The process facilitates a high degree of control over the particle size and size distribution of the particles in the ultrafine powder by controlling the parameters of mechanical activation and heat treatment. This process produces powders having a particle size in the range of 1 nm to 200 nm.

## Granted Patents

Country	Patent No.
Australia	751961
China	CN 11234150
Hong Kong	01108086.7
Singapore	76828
USA	6,503,475

## Pending Patent Applications

Country	Application No.
Canada	2,332,013
Europe	99920459.7
India	IN/PCT/2000/00429/DEL
Israel	139667
Japan	2000-549407
South Korea	7012810/2000

### Process for the Production of Ultrafine Plate-like Alumina Particles

The patent application for this invention describes and claims a process for the production of substantially discrete plate-like alumina particles. In the process nano-sized particles of an aluminium precursor compound, optionally formed by milling, are mixed with a sufficient volume fraction of a diluent and heat treated to form plate-like alpha alumina particles dispersed in the diluent. A mineraliser may be added to lower the effective melting point of the system. The substantially discrete plate-like alpha alumina particles may be formed using heat treatment below the melting point of the diluent phase and without agitation of the mixture.

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Pending Patent Applications	
Country	Application No.
International	PCT/AU2004/000005

An International application can be considered as a bundle of applications covering each of the countries designated in the application. Presently over 120 countries may be designated in an International application. These countries include Australia, Canada, China, all of the European Union countries, India, Israel, Japan, New Zealand, Singapore, South Korea and the USA. The International application listed above covers all of the countries and regions that were able to be designated at the time the International application was filed.

The International application does not mature into a granted world-wide patent. Instead, the International application provides a mechanism for filing separate national or regional patent applications in the countries or regions designated in the International application. The deadline for the filing of these separate applications is 7 July 2005 or 7 August 2005 for most countries. This process is known as "national phase entry".

ANT is not obliged to enter the national phase in any of the designated countries or regions. Once the national phase is entered in a particular country or region, the application is then treated as a regular patent application in that country or region.

**PATENT PORTFOLIO OF ANO**

ANO is the applicant in relation to pending patent applications in various countries in relation to two inventions entitled:

- (a) Substantially Visibly Transparent Topical Physical Sunscreen Formulation; and
- (b) A Zirconia Ceramic.

Brief details of this invention and its corresponding patent coverage are set out below.

**Substantially Visibly Transparent Topical Physical Sunscreen Formulation**

The patent applications describe and claim a substantially visibly clear and transparent topical sunscreen composition which comprises nano-sized particles of a physical UV screening agent in a dermatologically acceptable carrier to provide a dermatologically acceptable level of SPF and broad-spectrum protection from UVA and UVB radiation without the need to include chemical UV screening agents.

Pending Patent Applications	
Country	Application No.
Australia	2003205436
Europe	03702207.6
Japan	2003-570823
South Africa	2004/7639
USA	10/324,112

**A Zirconia Ceramic**

This invention is the subject of a provisional patent application filed in Australia only. This application has not yet been published. In order to maintain the confidentiality of this application, we provide no disclosure of its contents.

Pending Patent Applications	
Country	Application No.
Australia	2004904959

**LIKELIHOOD OF GRANT OF PATENTS**

In most countries, in order for a patent application to proceed to grant, the application must undergo substantive examination. Various criteria for patentability are assessed by a Patents Examiner in each country of application, including novelty (newness), inventiveness (obviousness) and industrial applicability of the invention. The Examiner usually conducts a search of prior patents and other documents published before the priority date of the application and may also rely on the results of searches conducted by other patent offices. Such documents are collectively known as "the prior art". The Examiner makes a determination as to whether the invention as claimed in the application is novel and inventive over the information disclosed in the prior art. Amendments to the claims may be required to overcome the Examiner's objections.

For the purposes of the Prospectus we have been asked to provide our opinion as to the likelihood that the pending patent applications listed above will proceed to grant. The opinions below are based solely on a review of the search results issued at the date of this Report by various Patent Offices. No additional prior art searching has been conducted. It should be noted that any document published before the priority date, not only patent specifications, as well as public and/or commercial use of processes and apparatus can serve as prior art.

**Process for the Production of Metals, Alloys and Ceramics**

All of the patent applications filed for this invention have been granted.

**Process for the Production of Ultrafine Particles**

Patents have already been granted for this invention in the key jurisdictions of the United States and Europe. Based on this, there are good prospects of obtaining patent grants in Canada and Japan where patent applications are still pending.

**Process for the Production of Ultrafine Powders**

The national and regional applications listed above for this patent family derived from International patent application number PCT/AU99/00368. The Australian Patent Office in its capacity as the International Searching Authority and International Examining Authority conducted a search of prior art and an examination of the claims of the International Patent application prior to entry into the National Phase. A clear International Preliminary Examination Report was issued by the Australian Patent Office indicating that all of the claims in the International patent application were novel, inventive and industrially applicable. In addition to this, a patent has already been granted for this family in the key jurisdiction of the United States. Based on this, there are good prospects of obtaining patent grants in each of the countries in which patent applications are still pending.

## **GRIFFITH HACK**

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### **Process for the Production of Ultrafine Plate-like Alumina Particles**

The Australian Patent Office in its capacity as the International Searching Authority has conducted a search of prior art and issued a Written Opinion as to the patentability of the claims of International Patent application number PCT/AU2004/000005. A response has been filed to the Written Opinion and it is anticipated that a clear International Preliminary Examination Report will issue shortly. On this basis, it is believed that there are good prospects for obtaining patents for this invention in the light of the prior art located by the Australian Patent Office.

### **Substantially Visibly Transparent Topical Physical Sunscreen Formulation**

The Australian Patent Office in its capacity as the International Searching Authority and International Examining Authority has conducted a search of prior art and an examination of the claims of International Patent application number PCT/AU03/00239 from which the Australian, European, Japanese and South African applications for this invention are derived. In addition, the United States Patent Office has issued a first Examiner's Report in relation to the US application.

We are advised by the Patent Attorneys handling these patent applications, on the basis of the prior art located by both the Australian and US Patent Offices, that there are good prospects of obtaining patents for this invention.

### **A Zirconia Ceramic**

No searching has yet been conducted in relation to the invention described in this application. We are therefore unable to provide any comment as to the likelihood of grant of a patent on this application.

### **VALIDITY**

No national Patent Office guarantees the validity of a patent, and more particularly a patent claim, that it grants. For example, subsection 20(1) of the Australian Patents Act 1990 provides: "Nothing done under this Act or the PCT guarantees the granting of a patent, or that a patent is valid in Australia or anywhere else".

Ultimately, when a dispute arises in relation to a patent, validity is determined by a competent Court in the jurisdiction in which a patent is granted. Due to differences in patent law from country to country, a finding of invalidity of one or more claim of a patent in one country does not necessarily mean that those claims will be held to be invalid by a Court in another country. Accordingly Griffith Hack is unable to provide any guarantee as to the validity of any of the claims of the granted patents.

### **PROPRIETORSHIP**

A patent for an invention can only be granted to a person who is the inventor or derives title to the invention from the inventor by way of contract or other operation of law.

Paul McCormick and Graham Schaffer are the inventors of the "Process for the Production of Metals, Alloys and Ceramic Materials". Paul McCormick, Jun Ding, Wie-Fang Miao and Robert Street are the inventors of the "Process for the Production of Ultrafine Particles". Paul McCormick and Takuya Tsuzuki are the inventors of the "Process for the Production of Ultrafine Powders". The patent applications for these inventions were originally filed in the name of The University of Western Australia. We believe The University of Western Australia acquired rights to the inventions from the inventors either by a contract of employment or an Assignment. Subsequently, The University of Western Australia assigned their rights to these inventions and the corresponding patents and patent applications to Advanced Nano Technologies Pty Ltd.

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John Robinson, Lara Cukrov, Takuya Tsuzuki, David Lee and Paul McCormick are the inventors of the "Process for the Production of Ultrafine Plate-Like Alumina Particles". The corresponding patent applications were filed in the name of Advanced Nano Technologies Pty Ltd. Advanced Nano Technologies Pty Ltd is entitled to the invention and the corresponding patent applications by virtue of a contract of employment with each of the inventors.

Takuya Tsuzuki, Malcolm Nearn and Geoff Trotter are the inventors of the "Substantially Visibly Transparent Topical Physical Sunscreen Formulation". The corresponding patent applications were filed in the name of Advanced Powder Technology Pty Ltd, which, as mentioned above, changed its name to Advanced Nanotechnology Limited (ANO). ANO is entitled to this invention and the corresponding patent applications from the inventors by virtue of a contract of employment or assignment with each of the inventors.

The patent application in respect of "A Zirconia Ceramic" is filed in the name of Advanced Nanotechnology Limited. To maintain confidentiality, we do not disclose the name of the inventor or inventors of this invention. Nevertheless, we advise that ANO is entitled to this invention and the corresponding patent application by virtue of a contract of employment or assignment with the inventor or inventors.

## FREEDOM TO OPERATE

The grant of a patent does not provide the patent owner with freedom to operate, i.e. commercially exploit, the invention defined by the claims of the patent. The use of an invention subject of a patent may nevertheless be an infringement of an earlier patent or other third party rights.

We have not conducted any search to ascertain whether use of the inventions covered by the patents and patent applications for ANT and ANO would infringe third party rights. It is recommended that such searches be conducted prior to the commercialisation of the inventions in any particular market. As infringement is judged on a country-by-country basis, separate freedom-to-operate searches should be conducted for each country in which an invention is to be worked.

## TRADE MARK PORTFOLIO OF ANO

ANO, under its former name of Advanced Powder Technology Pty Ltd, is the applicant and owner in relation to pending trade mark applications and registered trade marks patents, respectively, in various countries in relation to the trade marks listed in the following table.

Registered Trade Marks			
Country	Mark	Registration No.	Classes
Australia	ALUSION	940273	2
Australia	EVS	916512	19
Australia	NAN OZ	869912	2, 3, 5, 40
Australia	ZINCLEAR	905465	1
Australia	ZINCLEAR	911802	1
			
Japan	ZINCLEAR	4656114	1
USA	ZINCLEAR	2,781,492	1

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Trade Mark Applications			
Country	Mark	Application No.	Classes
Australia	NANO, NANOCREME, NANOCREAM, NANDSCREEN	935551	3
Europe	ALUSION	3215531	2
Europe	ZINCLEAR	2816122	1
Japan	ALUSION	2003-51769	2
South Korea	ALUSION	40-2003-0028931	2
South Korea	ZINCLEAR	40-2003-0036747	1, 3, 5
USA	ALUSION	76/523,467	2

VALIDITY

Under the trade mark laws of most countries and regions there is a presumption of validity for a registered trade mark. Notwithstanding this, Griffith Hack is unable to provide any guarantee as to the validity of any registered trade marks.

STATEMENT OF INDEPENDENCE

Griffith Hack has no interest in ANT and ANO other than fees for professional services. Griffith Hack has no involvement in the preparation of the prospectus by ANT and ANO other than the preparation of this Report. The information contained in this Report was current at the time the Report was prepared.

Yours faithfully  
GRIFFITH HACK



**A P (Tony) Mizzi**  
Principal

tony.mizzi@griffithhack.com.au



**MCCARTHY PORT**  
PATENT AND TRADE MARK ATTORNEYS

21 December 2004

Advanced Nanotechnology Ltd  
112 Radium Street  
Welshpool WA 6106  
AUSTRALIA

Dear Sirs,

**Freedom to Operate Issues relating to ZinClear sunblock formulations in light of patents in Australia and Overseas corresponding to US Granted Patent 5,587,148.**

This report has been prepared for inclusion in a prospectus to be lodged at the Australian Securities and Investment Commission for the purposes of listing on the Stock Exchange.

The report deals solely with freedom to operate issues relating to the ability of Advanced Nanotechnology Limited (AND) to manufacture, market and/or sell a sunblock formulation incorporating AND's proprietary ZinClear zinc oxide particles. More specifically, this report is limited to a discussion of the impact of Australian granted patent AU668862 ("the Sun Smart patent") and US granted patent 5, 587,148 ("the BASF patent") as well as corresponding applications filed in Europe and Japan on AND's freedom to operate.

The claims of a granted patent define in legal terms the scope of the monopoly enjoyed by a patentee. In effect they inform the public what can and cannot be done without a licence from the patentee. A person infringes a patent if their activities are found to fall within the scope of the claims. Patent rights are territorial. To infringe the claims of a granted US patent, the infringing activity must be occurring in the United States.

It is not uncommon for the wording of the claims of corresponding patents in different countries to be different by the time a patent application has progressed through the formal examination stage to grant. The reason for this is that the patent laws in each country are different. Whether or not a patent is infringed is determined on a country-by-country basis by considering the claims in light of the laws of each country.

The information provided below as it relates to patents and patent applications outside of Australia is limited to a report of the status of the corresponding patents overseas and general information regarding how the laws of each country differ from Australia. The advice of attorneys in each of the foreign jurisdictions discussed below has been sought in the preparation of this report.

**AUSTRALIAN GRANTED PATENT 668862 – "the Sun Smart patent"**

The Sun Smart patent was applied for on 4 February 1992, and sealed on 9 October 1996. The Australian Patent Office Register currently records the patentee as Sun Smart, Inc. of PO Box 1451 Wainscott, New York 11975, USA.

The claims of the Sun Smart patent in Australia relate to a transparent topical sunblock formulation for shielding the skin from ultraviolet radiation. The formulation contains visibly transparent micronized particles of zinc oxide with an average particle diameter of less than about 0.2 microns (200 nm) dispersed in a dermatologically compatible carrier. The claims further

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specify particular impurity limits which ANO have advised us are standard across the sunscreen industry. ZinClear particles have an average size range in the order of 25 to 50 nm and satisfy the impurity limits required by the claims.

The monopoly rights enjoyed by a patentee only exist while the patent is 'in force'. Moreover, under Australian law, infringement proceedings cannot be brought in respect of an infringement committed between the day on which a patent ceases and the day on which it is restored.

The Sun Smart patent ceased on 7 September 2000 due to a failure to pay the renewal fee due on 4 February 2000 or within the prescribed six month grace period. The patent was successfully restored as of 23 October 2002.

In Australia, if person is able to show that they began to exploit the invention because the patent had ceased, that person can apply for a licence to continue to exploit the invention even after the patent is restored. There is no time limit within which the application for a licence must be filed. The licence is granted on a discretionary basis by the Australian Commissioner of Patents, not the patentee. The terms and scope of the licence are determined by the Commissioner.

In a letter dated 13 February 2002, ANO were advised by their patent attorney of the cessation of the Sun Smart patent and further advised that "any third party is free to exploit the invention as claimed without risk of infringement". Based on the information provided to us by Advanced Nano to date and subject to a review of the evidence by ANO's legal representatives, we consider that ANO have reasonable prospects of successfully applying for a licence in Australia to continue to exploit the invention of the restored Sun Smart patent.

In the only reported decision in Australia under similar circumstances, (HRC Project Design Pty Ltd v Orford Pty Ltd (38 IPR 121), the company which exploited an invention because they had been advised by their patent attorneys that the patent had ceased were awarded a royalty free licence allowing them to continue to exploit the invention for the remaining term of the restored patent.

We further understand that to date, no allegation of infringement in Australia of the Sun Smart patent has ever been made against ANO.

**US GRANTED PATENT 5,587,148 – "the BASF US Patent"**

The United States Patent and Trade Marks Office database lists the assignee of US Patent 5,587,148 as BASF Corporation of 3000 Continental Drive-North, Mt. Olive, New Jersey, USA.

The claims of the BASF US patent have a different wording to those of the Sun Smart Australian patent. The claims in the US were amended whilst the application was under examination in order to distinguish the invention from US patent 5,032,390 (*Iwaya et al*). After a lengthy examination process, the patent was granted only after the feature of "a substantially colourless dermatologically acceptable liquid carrier" was added to the claims.

Under US patent law, the claims of a US patent after grant are interpreted in light of the history of file during the time the application was being examined. In particular, amendments made to the claims during examination to avoid an earlier publication can affect the way in which the scope of the claims is interpreted by the courts during infringement proceedings.

It is not known at this time whether the sale or manufacture of a sunblock formulation containing ANO's ZinClear particles would infringe the claims of the BASF US patent.

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**European Patent EP0585239**

European patent application number EP19920906777 was granted on 23 September 1998. The European Patent Office register lists the applicant as Sun Smart, Inc. of P.O. Box 1451, Wainscott, New York, USA. The grant of the patent was opposed by six companies. The opposition succeeded in that an amendment had been filed during examination of the European patent application that broadened the claims beyond what was disclosed in the patent specification. Under European law, this type of claim-broadening amendment is not allowed.

The decision to revoke the patent has been appealed. The Board of Appeal is yet to determine the matter.

**Japanese Patent Application No. 04-506443 (JP06506321T)**

The Japanese patent office issued a decision of rejection of Japanese patent application 04-506443 in October this year. The Japanese Patent Office records list the applicant as Sun Smart, Inc. of P.O. Box 1451 Wainscott, New York 11975, USA. The deadline for lodging an appeal against the decision to reject the application expires at the end of January 2005. To date an appeal has not been lodged.

**Statement of Independence**

McCarthy Port Patent and Trade Mark Attorneys have no interest in Advanced Nano other than fees for professional services rendered in the preparation of this report. The information contained in this report is current at the time of writing. McCarthy Port Patent and Trade Mark Attorneys have had no involvement in the preparation of the prospectus other than the preparation of this report and providing information relating to patent cases handled by our firm to Griffith Hack for inclusion in their report that appears in this prospectus.

Yours Faithfully,



Dr Marguerite Port  
Principal, McCarthy Port Patent and Trade Mark Attorneys

Section Eleven

# ADDITIONAL INFORMATION

*Image above: Porous Alumina*

## ADDITIONAL INFORMATION

### 11.1 CAPITAL STRUCTURE

The capital structure of Advanced Nano after the issue of the Shares under this Prospectus will be as follows:

Shareholder	Shares Held	Percentage of Shares after the Offer
Promoters	56,713,912	34.3%
Public	108,557,290	65.7%
Total	165,271,202	100.0%

Optionholder	Options Held	Percentage of Shares after the Offer	Expiry Date	Exercise Price
Employee Share Option Plan	8,813,769	5.3%	28 June 2008	\$0.308
Others	666,120	0.4%	31 December 2007	\$0.40
Total	9,479,889	5.7%		

In addition to the options shown above, the Company has approved but not yet issued the following options:

- 3,903,692 options to KTM Capital (refer Section 11.4.5). These options will have an exercise price of \$0.40 per option and are exercisable at any time prior to 31 December 2007;
- 250,000 options to each of the Company's three non-executive Directors (750,000 options in total). These options will be subject to a two year escrow restriction and issued upon the official quotation of the Shares on the ASX. Each option will have an exercise price of \$0.308 and a term of five years; and
- approximately 6.5 million options to be issued to employees upon the official quotation of the Shares on the ASX. These options will have a minimum exercise price of \$0.308 per option, a term of five years and subject to exercise restrictions and otherwise on the terms of the ESOPI.

### 11.2 RIGHTS ATTACHING TO SHARES

Immediately after issue and allotment, the new Shares will be fully paid ordinary shares. There will be no liability on the part of shareholders for any calls and the new Shares will rank *pari passu* with Shares currently on issue.

Detailed provisions relating to the rights attaching to the Shares are set out in the Company's Constitution and the Corporations Act. A copy of the Constitution can be inspected during office hours at the registered office of the Company.

Certain of the detailed provisions relating to the rights attaching to Shares under the Constitution and the Corporations Act are summarised below.

Each Share will confer on its holder:

- (a) the right to vote at a general meeting of shareholders (whether present in person or by any representative, proxy or attorney) on a show of hands (one vote per shareholder) and on a



poll (one vote per Share on which there is no money due and payable), subject to the rights and restrictions on voting which may attach to or be imposed on Shares (at present there are none);

- (b) the right to receive dividends, according to the amount paid up on the Share;
- (c) the right to receive, in kind, the whole or any part of the Company's property in a winding up, subject to the rights of a liquidator to distribute surplus assets of the Company (with the consent of members by special resolution).
- (d) subject to the Corporations Act and the Listing Rules, the right to transfer the Shares.

The rights attaching to Shares may be varied with the approval of shareholders in general meeting by special resolution.

### 11.3 EMPLOYEE SHARE OPTION PLAN

The Company has established an employee share option plan. The full terms of the ESOP can be inspected during office hours at the registered office of the Company.

#### *Objectives*

The objective of the ESOP is to assist in the recruitment, reward, retention and motivation of employees of Advanced Nano and its Subsidiaries.

#### *Consideration*

Each option will be issued free of charge.

#### *Exercise Price*

The exercise price for options granted under the ESOP will be the price fixed by the Board prior to the grant of the options. Unless a greater exercise price is fixed the exercise price shall be the volume weighted average price of ordinary shares on the ASX for the five business days preceding the grant date shown on the option certificate. In no circumstances may the exercise price be less than \$0.20. The exercise price for the options already granted or approved under the ESOP is set out in Section 11.1.

#### *Exercise Restrictions*

The options granted under the ESOP may be subject to such other restrictions on exercise as may be fixed by the Directors prior to grant of the options including, without limitation, length of service by the employee and threshold prices at which Shares are traded on the ASX. Any restrictions so imposed by the Directors must be set out on the option certificate.

#### *Participation in Dividends, Rights Issues and Bonus Issues*

The options granted under the ESOP do not give any right to participate in dividends or rights issues until Shares are allotted pursuant to the exercise of the relevant option. The number of Shares issued on the exercise of options will be adjusted for bonus issues made prior to the exercise of the options.

#### *Eligibility*

Under the ESOP, the Directors may invite employees including the executive officers to participate in the ESOP and receive options. An employee may receive the options or nominate a relative or associate to receive the options.

The number of Shares underlying options granted under the ESOP when aggregated with:

- the maximum number of Shares that could be issued on exercise of unexercised ESOP options and any other employee incentive share or option plan; and

- the number of Shares issued on exercise of options under the ESOP and any other employee incentive share or option plan in the last five years,

must not exceed 5% of the issued Shares at the time of grant of the options. This restriction will not apply if Advanced Nano has a current prospectus under which the options are granted or the issue does not otherwise require a prospectus.

#### *Term of Options*

The options granted under the ESOP have a term specified on the face of each option certificate. The expiry dates of the options already granted under the ESOP are set out in Section 11.1.

#### *Subdivision or Consolidation*

If Advanced Nano, after having granted any option under the ESOP, reduces its issued share capital or subdivides or consolidates its Shares, the number of the Shares issued to the option holder on exercise of an option will be reduced, subdivided or consolidated, as the case may be, in accordance with the ASX Listing Rules.

#### *Restrictions on Assignment*

Options (or any interest or right in respect of the Options) granted under the ESOP cannot be assigned.

### 11.4 MATERIAL CONTRACTS SUMMARY

The Directors consider that the material contracts described below and elsewhere in this Prospectus are the contracts that an investor would reasonably regard as material and which investors and their professional advisers would reasonably expect to find described in this Prospectus for the purpose of making an informed assessment of the Offer.

The following is a summary only of the material contracts and their substantive terms.

#### **11.4.1 APT/UWA Transfer Agreement**

On 17 April 2000 Robert Street, Frank Honey, Paul McCormick, Michael Dallimore (Founding Shareholders), the Company, UWA and ANT reached agreement for the transfer of technical information and product know-how and issue of shares. Pursuant to the agreement the Company issued the equivalent of 62,031,835 ordinary fully paid shares to UWA in consideration for the transfer of intellectual property rights in the technical data, know-how and patents owned by UWA to the Company.

#### **11.4.2 Oxonica Agreement**

The Company and Oxonica entered into a Project Collaboration Agreement on 5 March 2003 for the purpose of developing the product technology and production processes to prepare stable monodispersed, nanoparticulate suspensions of rare-earth oxides dispersed in organic media for application as a fuel additive to be used in any fuel combustion device ("Product").

The role of Oxonica includes developing the use of the Product as a fuel additive in any fuel combusting device to reduce emissions and/or improve fuel consumption and defining the key attributes of the Product(s) necessary to perform competitively, providing proposals and suggestions for Product development and undertaking, in collaboration with the Company, laboratory studies to progress Product development.

Subject to satisfaction of certain conditions, the Project Collaboration Agreement provided for Oxonica and the Company to enter into a formal supply agreement for the Product. Advanced Nano and Cerulean, Oxonica's wholly owned subsidiary, are currently negotiating the terms and conditions of a formal supply agreement.

#### 11.4.3 Buhler AG

The Company and Buhler AG are parties to a Distribution Agreement dated 11 June 2004. Pursuant to the agreement Buhler AG has the exclusive right to distribute the Company's product NanoZ® and any future improvements to the product worldwide with the exception of Australia, New Zealand, North America and Japan. The agreement expires on 11 June 2005 unless terminated earlier. If Buhler AG meets various performance criteria it may continue to renew the agreement for consecutive 12 month terms.

The Company and Buhler AG are also parties to a non-binding Heads of Agreement dated 11 June 2004 to evaluate formation of a joint venture for the manufacture and sales of nanomaterial dispersions worldwide. Under the Heads of Agreement Buhler AG has the first right of refusal to form a joint venture and/or strategic investment with the Company with respect to the Company's existing and future products in the markets for the manufacture of industrial coatings, plastics, adhesives and other market opportunities to be negotiated at a later stage. The non-binding Heads of Agreement expired on 31 December 2004, however the companies are in the process of negotiating a six month extension of the agreement.

#### 11.4.4 Samsung Corning Agreements

ANT has agreed to buy-back Samsung Corning's shareholding in ANT. Consideration for the buy-back will be satisfied by:

- the transfer of a 50% interest in the following intellectual property rights:
  - (i) Original MCP™ intellectual property transferred by UWA to ANT as part of the shareholders agreement relating to ANT and any improvements thereon;
  - (ii) Equipment design intellectual property developed by ANT for the manufacture of MCP™ nanopowders up to the date of Samsung Corning's exit from ANT; and
  - (iii) Nanopowder synthesis intellectual property developed by ANT up to the date of Samsung Corning's exit from ANT; and
- payment of \$1,035,902 in cash to Samsung Corning.

Completion is expected to take place before the end of the Offer Period at which time ANT will become a wholly owned subsidiary of the Company.

ANT and Samsung Corning are parties to a co-ownership agreement in relation to the intellectual property the subject of the transfer to Samsung Corning. The co-ownership agreement provides that ANT and Samsung Corning jointly make decisions regarding patent applications and maintenance and share the costs involved. The agreement provides that if either ANT or Samsung Corning denies its cost sharing responsibility, it forgoes its rights to the specific intellectual property in the relevant jurisdiction.

In the event of a third party's infringement of any intellectual property rights, ANT and Samsung Corning must cooperate in relation to the proceedings and share the cost of any necessary action. However, if only one party wants to pursue the case, that party has the sole responsibility for the proceeding and the other party forgoes its rights to the specific intellectual property in the relevant jurisdiction.



Each party may grant to its Subsidiaries a worldwide, non-exclusive license to utilise all or particular intellectual property rights. With the written consent from the other each of ANT and Samsung Corning may grant to a third party a worldwide, non-exclusive license to utilise intellectual property rights for a particular application, field and territory.

The agreement terminates automatically with respect to a particular patent on the cessation of that patent and otherwise by mutual agreement.

#### **11.4.5 Underwriting Agreement**

Under this agreement dated 10 January 2005 ("the Agreement"), KTM Capital as the Underwriter has agreed to place the Offer of 45 million Shares pursuant to this Prospectus. The Underwriter will receive an underwriting fee of \$300,000 and a management fee of \$150,000. On completion of the Offer, the Company must also issue 3,903,692 options to acquire ordinary shares in the Company to the Underwriter or as it may direct. These options have an exercise price of 40 cents per option and are exercisable at any time prior to 31 December 2007. The Underwriter will also receive payment of reasonable costs and expenses incurred by the Underwriter in connection with the Offer. Advanced Nano will also pay any GST applicable to any fee payable to the Underwriter under the agreement.

The Underwriter may terminate its obligations to satisfy a shortfall if any of the termination events specified in the agreement occur before the Shares are allotted under the Offer. The termination events are qualified by a requirement that before being entitled to terminate the Underwriter must believe, on reasonable grounds acting bona fide, that the relevant termination event has or is likely to have a materially adverse effect on the Company, or the outcome of the Offers or could give rise to a material liability of the Underwriter. Events of termination include:

- a statement contained in the Prospectus being found to be misleading or deceptive, a material omission or non-disclosure in the Prospectus or the Underwriter forming the opinion that the Prospectus fails to satisfy Sections 710 or 711 of the Corporations Act;
- the Prospectus not containing all information as required by the Corporations Act;
- any information given by the Company to the Underwriter being found to be misleading or deceptive;
- any adverse change occurring in the assets, liabilities, financial position, profits, losses or prospects of the Company;
- the introduction or proposal of any law or any policy by any Government or body in any jurisdiction in which the Company offers products or services which affects, or is likely to affect, the successful promotion of these products or services or the industry of which the Company is a part;
- the Company becomes aware of a matter that is materially adverse from the point of view of an investor as envisaged in Section 719(1) of the Corporations Act;
- at any time after issue of the Prospectus:
  - i) there occurs a change affecting any matter contained in the Prospectus, as envisaged in Sections 719 and 724 of the Corporations Act occasioning the need, in the Underwriter's reasonable opinion, for a Supplementary Document to be lodged;

- ii) there arises a significant new matter, the inclusion in the Prospectus of information about which would have been required by Chapter 6D and 7.9 of the Corporations Act if it had arisen when the Prospectus was prepared, as envisaged in Sections 719 and 724 of the Corporations Act;
  - iii) there is a deficiency in the Prospectus within the meaning of Section 719 of the Corporations Act;
  - iv) the issuer converts all or any of its shares into a larger or smaller number of Shares;
  - v) the issuer or a Subsidiary resolves to reduce its share capital in any way;
  - vi) the Issuer or a Subsidiary enters into a buy-back agreement or resolves to approve the terms of a buy-back agreement in accordance with Part 2J.1 Division 2 of the Corporations Act except the buy-back of shares in ANT;
  - vii) the Issuers or a Subsidiary makes an allotment of or grants an option to subscribe for any of its shares or agrees to make such an allotment or grant such an option except an allotment or grant contemplated in the Prospectus;
  - viii) the issuer or a Subsidiary issues or agrees to issue convertible notes;
  - ix) the issuer or a Subsidiary disposes or agrees to dispose of the whole or a substantial part of its business or property;
  - x) the issuer or a Subsidiary charges or agrees to charge the whole or a substantial part of its business or property;
  - xi) the issuer or a Subsidiary resolves that it be wound up;
  - xii) a provisional liquidator of the Issuer or a Subsidiary is appointed;
  - xiii) a court makes an order for the winding up of the Issuer or of a Subsidiary;
  - xiv) an administrator is appointed under Sections 436A, 436B or 436C of the Corporations Act to the Issuer or a Subsidiary;
  - xv) the issuer or a Subsidiary executes a deed of company arrangement;
  - xvi) a receiver or receiver and manager is appointed in relation to the whole or substantial part of the property of the Issuer or a Subsidiary; or
  - xvii) the issuer withdraws the Prospectus;
- which is materially adverse from the point of view of an investor;
- an outbreak or escalation of hostilities or a state of war existing after the date of the Agreement involving Australia, New Zealand, United States of America, the Commonwealth of Independent States or any of its constituent republics, Canada, Japan, Thailand, Singapore, Malaysia, Hong Kong, North Korea or the Republic of China;
  - the All Ordinaries index of the ASX decreasing by 10% or more below the level of that index on the date of the Agreement and remains at or below that level for a period of at least three consecutive trading days;
  - the Small Ordinaries index of the ASX decreasing by 10% or more below the level of that index on the date of the Agreement and remains at or below that level for a period of at least three consecutive trading days;

- the introduction into any parliament in Australia or announcement by a government in Australia of any prospective law or the adoption by the Reserve Bank of Australia of any new regulation or policy which adversely affects, or is likely to adversely affect, the principal business of the Company or capital issues or stock markets generally;
- any material adverse change or disruption to the financial markets of Australia, United States of America or other major international financial markets occurring or any change occurring in national or international political, financial or economic conditions which would make it impractical, in the reasonable judgement of the Underwriter, to market the Shares or to enforce contracts to purchase the Shares or is reasonably likely to materially and adversely affect the success of the Offer;
- a director of the Company being charged with an indictable offence;
- the Company contravening its constitution or the Corporations Act;
- the approval to the official quotation of the Shares on the ASX being refused, not granted or granted subject to any condition which the Underwriter reasonably considers unacceptable on or before the Listing Approval Date;
- the approval to the official quotation of all of the Shares on the ASX being withdrawn or qualified on a basis which the Underwriter reasonably considers unacceptable;
- the ASIC issuing an order, or giving notice of its intention, to hold a hearing in relation to the Prospectus or issuing a stop order under Section 739 of the Corporations Act or commencing an examination of any person or document in connection with the offer of the Shares under Sections 19 or 30 to 33 of the Australian Securities and Investments Commission Act;
- an application being made by the ASIC for an order under Section 1324B of the Corporations Act in relation to the Prospectus;
- any person other than the Underwriter withdrawing their consent to the issue of the Prospectus;
- any person giving notice under Section 730 of the Corporations Act in relation to the Prospectus;
- the Company defaulting in the performance of any of its material obligations under the agreement;
- a representation or warranty made or given, or deemed to have been made or given, by the Company under the agreement proving to have been untrue or incorrect in any material respect and not being remedied to the satisfaction of the Underwriter;
- any of the material contracts being varied, repudiated, rescinded or terminated without the Underwriter's prior written consent;
- the Company becoming engaged in any legal action or dispute, arbitration, mediation or other proceeding in any court or tribunal including, without limitation, any legal action or dispute concerning intellectual property rights against the Company; and
- any director of the Company dying or becoming a person whose estate may be dealt with in accordance with the Protected Estates Act 1983.



The Company has agreed to indemnify the Underwriter, its related bodies corporate and each of its officers, employers and advisers (each an Indemnified Party) from and against any and all losses, liabilities, claims, damages, costs and expenses whatsoever (including reasonable legal costs on a full indemnity basis) arising out of:

- (a) any representation or warranty made by the Company under the agreement not being correct in any material respect;
- (b) any material breach of the agreement by the Company;
- (c) any advertisement or publicity of the Offer issued with the written approval of the Company and without consent of the Underwriter; or
- (d) the distribution of the Prospectus and the making of the Offer; or
- (e) any claim that an Indemnified Party has any liability under the Corporations Act (including, but not limited to, Section 1041H) or any other law (including, but not limited to, Part V of the Trade Practices Act or any similar legislation applying in any State or Territory) in relation to the Offer.

The indemnity provided by the Company does not apply to any loss, damage, cost or expense to the extent that it arises out of any untrue statement or omission or alleged untrue statement or omission made in reliance upon and in conformity with written information furnished to the Company by the Underwriter expressly for use in the Prospectus. The indemnity does not extend to and is not deemed to be an indemnity against any loss of an Indemnified Party where such loss results from a breach by a party of its obligations under the agreement or any fraud, recklessness, willful misconduct or negligence of an Indemnified Party.

#### **11.4.6 Executive Service Agreement for Dr Paul McCormick (Chief Executive Officer)**

Advanced Nano has appointed Dr Paul McCormick as Chief Executive Officer reporting to the Board by way of an Executive Service Agreement. The Executive Service Agreement, dated 14 December 2004, has a term of three years commencing on the date on which Advanced Nano is admitted to the official list of the ASX unless terminated earlier in accordance with the agreement. The initial remuneration payable to Dr McCormick comprises base remuneration having a total cost to Advanced Nano of \$210,000 per annum (inclusive of mandatory superannuation contributions and excluding the value of options issued). Dr McCormick has undertaken not to engage in competitive conduct with Advanced Nano for the term of the agreement and for a further period of two years.

#### **11.4.7 Executive Service Agreement for Deana Cesari (Chief Financial Officer)**

Advanced Nano has appointed Ms Deana Cesari as Chief Financial Officer reporting to the Board by way of an Executive Service Agreement. The Executive Service Agreement, dated 14 December 2004, has a term of three years commencing on the date on which Advanced Nano is admitted to the official list of the ASX unless terminated earlier in accordance with the agreement. The initial remuneration payable to Ms Cesari comprises base remuneration having a total cost to Advanced Nano of \$143,000 per annum (inclusive of mandatory superannuation contributions and excluding the value of options issued). Ms Cesari has undertaken not to engage in competitive conduct with Advanced Nano for the term of the agreement and for a further period of two years.

#### 11.4.8 Director Protection Deeds

Advanced Nano has agreed to provide access to the books and records of the Company to current officers of the Company while they are officers and for a period of seven years from when they cease to be officers. The Company has agreed to indemnify, to the extent permitted by the Corporations Act, each officer in respect of certain liabilities which the officer may incur as a result of, or by reason of (whether solely or in part), being or acting as an officer of the Company. Advanced Nano has also agreed to use its reasonable commercial endeavours to maintain in favour of each officer a directors' and officers' policy of insurance for the period that they are an officer and for a period of seven years after the officer ceases to be an officer of the Company.

#### 11.5 LITIGATION

Advanced Nano is not, and has not been, during the 12 months preceding the date of this Prospectus, engaged in any legal proceedings which would be likely to have a material adverse effect on its business, financial condition or the results of its operations nor, in so far as the Directors are aware, are any such proceedings pending or threatened.

#### 11.6 CONSENTS AND DISCLAIMERS OF RESPONSIBILITY

Written consents to the issue of this Prospectus have been given and at the date of this Prospectus have not been withdrawn by the following parties:

Watson Mangioni has given and, before lodgement of this Prospectus, has not withdrawn its consent to be named as lawyers to the Offer in the form and context in which it is named. Watson Mangioni specifically disclaims liability to any person in the event of any omission from, or any misleading or deceptive statement included elsewhere in, this Prospectus. While Watson Mangioni has provided advice to the Directors in relation to the issue of this Prospectus and the conduct of due diligence enquiries by the Company and the Directors, Watson Mangioni has not authorised or caused the issue of this Prospectus and takes no responsibility for any part of the Prospectus other than references to its name.

Moore Stephens WI Pty Limited has given and, before lodgement of this Prospectus, has not withdrawn its consent to be named as Independent Accountants to the Offer in the form and context in which they are named. Moore Stephens WI Pty Limited specifically disclaims liability to any person in the event of any omission from, or any misleading or deceptive statement included elsewhere in, this Prospectus. It has not authorised or caused the issue of this Prospectus and take no responsibility for any part of the Prospectus other than the Independent Accountant's Report.

KTM Capital Pty Limited has given and, before lodgement of this Prospectus, has not withdrawn its consent to be named as Underwriter in the form and context in which it is named. KTM Capital Pty Limited specifically disclaims liability to any person in the event of any omission from, or any misleading or deceptive statement included elsewhere, in this Prospectus. It has not authorised or caused the issue of this Prospectus and takes no responsibility for any part of the Prospectus other than the references to its name.

The Office of the Auditor General of Western Australia has given and, before lodgement of this Prospectus, has not withdrawn its consent to be named as auditors of the Company (Advanced Nanotechnology Limited) for the financial years ending 30 June 2003 and 30 June 2004 in the form and context in which they are named. The Office of the Auditor General of Western Australia specifically disclaims liability to any person in the event of any omission from, or any misleading or deceptive statement included elsewhere in, this Prospectus. It has not authorised or caused the issue of this Prospectus and takes no responsibility for any part of the Prospectus.

PricewaterhouseCoopers has given and, before lodgement of this Prospectus, has not withdrawn its consent to be named as auditors of Advanced Nano Technologies Pty Ltd in the form and context in which they are named. PricewaterhouseCoopers specifically disclaims liability to any person in the event of any omission from, or any misleading or deceptive statement included elsewhere in, this Prospectus. It has not authorised or caused the issue of this Prospectus and takes no responsibility for any part of the Prospectus.

Ernst & Young has given and, before lodgement of this Prospectus, has not withdrawn its consent to be named as auditors of the Company in the form and context in which they are named. Ernst & Young:

- (a) does not make, or purport to make, any statement in this Prospectus or on which a statement made in this Prospectus is based other than as specified in this Section 11.6; and
- (b) to the maximum extent permitted by law, expressly disclaims and takes no responsibility for any part of this Prospectus other than a reference to its name and a statement included in this Prospectus with the consent of Ernst & Young as specified in this Section 11.6.

Griffith Hack has given and, before lodgement of this Prospectus, has not withdrawn its consent to be named as Patent Attorneys acting for the Company and for the inclusion of their Patent Attorney's Report in the form and context in which it is included in Section 10 of this Prospectus. Griffith Hack specifically disclaims liability to any person in the event of any omission from, or any misleading or deceptive statement included elsewhere in, this Prospectus. It has not authorised or caused the issue of this Prospectus and take no responsibility for any part of the Prospectus other than the inclusion of their Patent Attorney's Report and the inclusion of their consent in the Prospectus.

McCarthy Port has given and, before lodgement of this Prospectus, has not withdrawn its consent to be named as Patent Attorneys acting for the Company and for the inclusion of their Freedom to Operate Report in the form and context in which it is included in Section 10 of this Prospectus. McCarthy Port specifically disclaims liability to any person in the event of any omission from, or any misleading or deceptive statement included elsewhere in, this Prospectus. It has not authorised or caused the issue of this Prospectus and take no responsibility for any part of the Prospectus other than the inclusion of their Freedom to Operate Report and the inclusion of their consent in the Prospectus.

Computershare Investor Services Pty Limited has given and, as at the date hereof, has not withdrawn, its written consent to be named as Share Registrar in the form and context in which it is named. Computershare Investor Services Pty Limited has had no involvement in the preparation of any part of the Prospectus other than being named as Share Registrar to the Company. Computershare Investor Services Pty Limited has not authorised or caused the issue of, and expressly disclaims and takes no responsibility for, any part of the Prospectus.

### 11.7 EXPENSES OF THE OFFER

All expenses connected with the Offer are being borne by the Company. Except as disclosed elsewhere in this Prospectus, no form of payment of any kind will be made or agreed to be made to any expert or firm other than for cash. The expenses of the Offer (excluding any applicable GST) are estimated as follows:

Expense	\$
Accounting	45,000
Legal	110,000
Underwriting	450,000
Printing	20,000
Share registry	10,000
ASX and ASIC	55,000
<b>Total</b>	<b>690,000</b>

Except as set out above or elsewhere in this Prospectus, no sums have been paid or agreed to be paid to any professional adviser or other person in cash, Shares or otherwise by any person in connection with the formation or promotion of Advanced Nano. Certain parties and employees of the above firms may subscribe for Shares in the context of the Offer.

### 11.8 INTERESTS OF DIRECTORS AND OTHERS

Other than as set out in this Prospectus:

- no Director or other person envisaged in Section 711(4) of the Corporations Act has, or has had in the two years before the date of this Prospectus, any interest in the Offer, in the formation or promotion of the Company or in any property of or proposed to be acquired by the Company in connection with the formation or promotion of the Company or the Offer;
- no amount, whether in cash or Shares or otherwise, has been paid or agreed to be paid, or any benefit given or agreed to be given, to any Director to induce him or her to become, or to qualify him or her as, a Director; and
- no amount, whether in cash or Shares or otherwise, has been paid or agreed to be paid, or any benefit given or agreed to be given, for services provided by a Director or other person envisaged in Section 711(4) of the Corporations Act in connection with the formation or promotion of the Company or the Offer.

### 11.9 SHAREHOLDINGS AND OPTIONHOLDINGS

Directors are not required under the Constitution of the Company to hold any Shares in the Company. As at the date of this Prospectus, Directors of the Company and their Associates hold the following shareholdings and optionholdings in the Company:

Director	No. of Shares	No. of Options
Harold Clough	4,922,432	—
David Griffiths	—	—
Robert Mangioni	—	—
Paul McCormick	3,531,157	5,911,157
<b>Total</b>	<b>8,453,589</b>	<b>5,911,157</b>

Advanced Nano has approved but not yet issued 250,000 options to each of the Company's three non-executive Directors (750,000 options in total). These options will be subject to a two year escrow restriction and issued upon the official quotation of the Shares on the ASX. Each option will have an exercise price of 30.8 cents and a term of five years.

Under the terms and conditions of a call option deed between UWA and the original inventors of the MCP™ technology, Dr McCormick has rights to acquire the equivalent of 13,902,165 Shares from UWA. These Shares have not been included in the above table.

Directors may apply for Shares under this Prospectus. As at the date of this Prospectus all Directors have determined to increase their shareholding by applying for Shares under this Prospectus.

#### 11.10 REMUNERATION

Under the Company's Constitution, each Director (other than the Chief Executive Officer or an Executive Director) may be paid remuneration for ordinary services performed as a Director. Under the ASX Listing Rules, the maximum fees payable to Directors may not be increased without prior approval from the Company at a general meeting. Directors will seek approval from time to time as deemed appropriate.

The aggregate remuneration that may be paid to non-executive Directors is \$250,000. This remuneration may be divided among the non-executive Directors in such a fashion as the Board may determine. Notice of any proposed increase in the total amount of the remuneration payable to the non-executive Directors must be given to members in the notice covering the general meeting at which the increase is to be proposed. Directors will seek approval from time to time as deemed appropriate.

Executive Directors are full time employees of the Company. No director's fees are paid to Dr McCormick in addition to his annual remuneration. Details of remuneration payable under the executive service agreements for Dr McCormick are set out in Section 11.4.B above.

The Directors may also be paid all travelling and other expenses properly incurred by them in attending meetings of the Directors or any committee of Directors or general meetings of the Company or otherwise in connection with the execution of their duties as Directors.

In addition, any Director who is called on to perform extra services or to make special exertions or to undertake any executive or other work for the Company beyond his ordinary duties or to go or to reside abroad or otherwise for the purposes of the Company may, subject to law, be remunerated either by a fixed sum or a salary as determined by the Directors. This sum may be either in addition to or in substitution for his share in the remuneration for ordinary services.

#### 11.11 RELATED PARTY TRANSACTIONS

Other than as set out in this Prospectus, the Company is not party to any transactions with related parties.

#### 11.12 ESCROW ARRANGEMENTS

Chapter 9 of the Listing Rules precludes holders of restricted securities from disposing of those securities or an interest in those securities or agreeing to dispose of those securities or an interest in those securities for the relevant restriction periods. The holder will also be precluded from granting a security interest over those securities.



The ASX may review these restrictions during consideration of Advanced Nano's application for admission to the official list of the ASX. The ASX may also, at its discretion, waive or vary the requirements in accordance with the Listing Rules in the event that an affected holder and Advanced Nano applies for a review of any escrow restrictions.

The Promoters of the Company (comprising UWA and certain Directors and related entities) will hold 56,713,912 Shares, or 34% of the total issued capital. Non-executive Directors will also hold options to acquire 750,000 Shares. The escrow arrangements require these security holders to not dispose of any interest in or to grant any security over any of the escrowed securities to be held by them on completion of the Issue. These restrictions will terminate on or before the date which is 24 months after the date of admission of Advanced Nano to the Official List of the ASX. This restriction will not preclude these security holders from accepting a takeover offer provided holders of not less than 50% of the remaining Shares then on issue have accepted the takeover offer.

#### 11.13 CORPORATE GOVERNANCE

The composition of the Board is subject to shareholder approval. All nominations for appointment to the Board are reviewed by the current Board. Currently, the Board comprises Harold Clough (Non-Executive Chairman), David Griffiths (Non-Executive Director), Robert Mangioni (Non-Executive Director) and Paul McCormick (Chief Executive Officer). At each annual general meeting one third of the Board will retire and, if those Directors so choose, will offer themselves for re-election.

The Company policies regarding the terms and conditions for remuneration relating to the appointment and retirement of Board members are approved by the Board after seeking professional advice. The remuneration and terms and conditions of employment for the Chief Executive Officer and other executive Directors and senior executives are also reviewed and approved by the Board after seeking professional advice.

Non-Executive Directors have the right to seek independent professional advice in the furtherance of their duties as Directors at the Company's expense. The Chairman's prior approval of such expenditure is required.

The Board is the vehicle to facilitate the identification of significant areas of business risk, to implement procedures to manage such risks and to develop policies regarding the establishment and maintenance of appropriate ethical standards. In relation to these matters, the Board specifically:

- ensures compliance in legal, statutory and ethical matters;
- monitors the business environment;
- identifies business risk areas;
- identifies business opportunities; and
- monitors systems established to ensure prompt and appropriate responses to shareholder complaints and enquiries.

The Company does not presently have an audit committee, however, all members of the Board currently participate in matters affecting the auditing requirements of the Company.

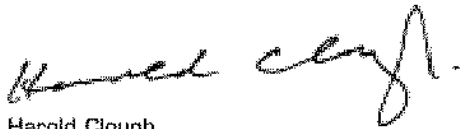
Section Twelve

# APPROVAL

*Image above: Zirconium Oxide Nano Rods*

# APPROVAL

The Directors consent to, and have authorised the issue of, this Prospectus.



**Harold Clough**  
Non-Executive Chairman



**David Griffiths**  
Non-Executive Director



**Robert Mangioni**  
Non-Executive Director

**Paul McCormick**  
Chief Executive Officer

Section Thirteen

# GLOSSARY OF TERMS

*Image above: Ceria Rods*

# GLOSSARY OF TERMS

The following terms and abbreviations used in this Prospectus have the following meanings:

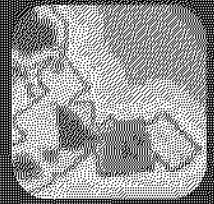
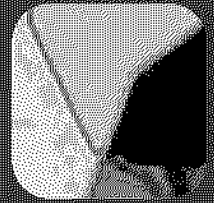
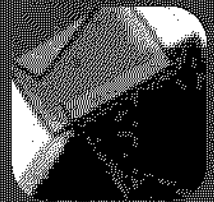
## GENERAL TERMS

<b>Term/Abbreviation</b>	<b>Meaning</b>
A\$, \$	Australian Dollars
Alumina	Aluminium oxide
ANT	Advanced Nano Technologies Pty Ltd
Applicant	A person who submits an Application
Application	A valid application to subscribe for or acquire a specified number of Shares under the Offer
Application Form	The application form which is attached to and forms part of this Prospectus in relation to the subscription or purchase of Shares
ASIC	Australian Securities & Investments Commission
Associate	An "associate" as defined in the Corporations Act
ASX	Australian Stock Exchange Limited
Auditor General	Office of the Auditor General of Western Australia
Board	The board of Directors of the Company
Ceria	Cerium oxide
CHESS	Clearing House Electronic Subregister System
Closing Date	The date on which the application list closes, which is expected to be 4 February 2005 unless the Directors, in conjunction with the Underwriter, exercise their right to vary that date
Company or Advanced Nano	Advanced Nanotechnology Limited (ACN 079 845 855)
Constitution	The constitution of the Company
Cosmeceutical	Convergence of cosmetic and pharmaceutical products to improve appearance
Dermaceutical	Preparations for use on the skin which may have medicinal properties
Directors	Directors of the Company
ESOP	Employee Share Option Plan
Financial Year	A year commencing on 1 July and ending on 30 June of the following year
GST	Goods and Services Tax
Issue	The issue of Shares pursuant to this Prospectus
KTM Capital or Underwriter	KTM Capital Pty Limited (ACN 086 281 950)
Listing Rules	Official Listing Rules of the ASX



MRI	Magnetic Resonance Imaging
Nanometre (nm)	One billionth of a metre ( $10^{-9}$ m)
Offer	The offer of Shares under this Prospectus
Offer Price	\$0.20 per Share
Offer Shares	The Shares to be issued by the Company pursuant to this Prospectus
Pari passu	Of equal value, having the same rights and privileges
Promoters	Means the shareholders of the Company on the date of this Prospectus being the shareholders referred to in Section 11.12
Prospectus	This prospectus dated 10 January 2005 for the offer of 45 million Shares in Advanced Nano as modified by any supplementary prospectus made by the Company and lodged with ASIC from time to time
RCAMMP	Research Centre for Advanced Mineral and Materials Processing
Samsung Corning	Samsung Corning Co. Ltd.
Shares	Ordinary shares in the Company
SPF	Sun Protection Factor
Subsidiary	A "subsidiary" defined in the Corporations Act
Topical	Applied to the skin
Underwriter	KTM Capital Pty Limited (ACN 086 281 950)
US\$	United States Dollars
UV	Ultra Violet
UVA	Ultra Violet A Spectrum
UVB	Ultra Violet B Spectrum
UWA	The University of Western Australia

# CORPORATE DIRECTORY



## **Directors**

Harold Clough AO, OBE  
(Non-Executive Chairman)

David Griffiths  
(Non-Executive Director)

Robert Mangioni  
(Non-Executive Director)

Paul McCormick  
(Chief Executive Officer)

## **Company Secretary**

Deana Casari

## **Registered Office**

112 Radium Street  
Welshpool WA 6106

Telephone: +61 (8) 6488 8778  
Facsimile: +61 (8) 6488 8779

*Effective from 1 February 2005*

108 Radium Street  
Welshpool WA 6106

Telephone: +61 (8) 9458 0800  
Facsimile: +61 (8) 9458 0810

## **Independent Accountant**

Moore Stephens WJ Pty Limited  
Level 5  
14 Martin Place  
Sydney NSW 2000

Telephone: +61 (2) 8236 7700  
Facsimile: +61 (2) 9233 4636

## **Underwriter**

KTM Capital Pty Limited  
Level 2  
16 O'Connell Street  
Sydney NSW 2000

Telephone: +61 (2) 9235 9900  
Facsimile: +61 (2) 9235 9999

## **Solicitors to the Offer**

Watson Mangioni  
Level 13  
50 Carrington Street  
Sydney NSW 2000

Telephone: +61 (2) 9262 6666  
Facsimile: +61 (2) 9262 2626

## **Share Registrar**

Computershare Investor Services  
Pty Limited  
Level 2  
45 St Georges Terrace  
Perth WA 6000

GPO Box D182  
Perth WA 6840

Telephone: 1300 557 010  
Facsimile: +61 (8) 9323 2033

## **Auditor**

Ernst & Young  
11 Mounts Bay Road  
Perth WA 6000

Telephone: +61 (8) 9429 2222  
Facsimile: +61 (8) 9429 2436



ADVANCED  
NANOTECHNOLOGY  
LIMITED