

\$5M Govt Funding for new Battery Recycling Centre partnered by SAU subsidiary IonDrive Technologies

Highlights

- The University of Adelaide (UoA) to receive \$5M funding from the Australian Research Council (ARC) for the establishment of a new ARC Industrial Transformation Training Centre for Battery Recycling
- This initiative will be overseen by Professor Shizhang Qiao, and the University of Adelaide will serve as the lead and administrative institution for the management of the grant
- Top of Form IonDrive Technologies (IDT) is the key industry partner to UoA in ARC's Battery Recycling Training Centre, leveraging substantial government support to accelerate its Battery Recycling solutions
- A portion of the contributed funding will be dedicated to advancing IDT's Direct Solvent Extraction (DES) battery recycling technology for expedited commercialisation
- "These new ARC Industrial Transformation Training Centres and Research Hubs will allow Australia's best researchers to engage with critical industry partners to address current and future challenges faced by industrial sectors," Ms Zielke, ARC CEO said
- IDT has a strategic partnership agreement with the University of Adelaide and has exclusively licensed three next-generation battery material technologies from the University, led by Professors Shizhang Qiao and Zaiping Guo, distinguished Laureate Professors in nanomaterials and energy storage who have secured government grants on numerous occasions, underscoring their exceptional track record.
- ARC's Battery Recycling Training Centre positions UoA and IDT at the forefront of battery recycling research in Australia, targeting transformative solutions in the area of battery recycling

Southern Gold Limited (ASX: SAU) ('Southern Gold' or the 'Company') is pleased to announce its 100%-owned, battery technology company IonDrive Technologies Pty Ltd ("IDT") is now the key partner organisation in a newly awarded Australian Research Council (ARC) Industrial Transformation Training Centre for Battery Recycling in Adelaide, SA.

ARC Media Release viewed here: <https://www.arc.gov.au/news-publications/media/media-releases/64-million-funding-new-arc-industrial-transformation-training-centres-and-arc-industrial>

IonDrive's General Manager JC Tan said:

"This funding is a major milestone for IonDrive as the ARC grants are highly competitive and peer-reviewed, highlighting their significance. Our goal is to transform battery technology and recycling, moving closer to commercialisation. IDT and the Professors will together lead vital research for Australian battery recycling, particularly focusing on DES and its commercialisation. This grant will also drive more IP and patents, potentially in collaboration with other universities. Critically, it is my belief that this funding will in part help to advance further research to improve the efficiency of IonDrive's Direct Solvent Extraction recycling IP which is potentially a low cost, environmentally friendly, highly selective method for the recovery of battery metals such as Li, Ni, Mn and Co."

Southern Gold Managing Director Robert Smillie said:

“The establishment of the ARC Training Centre for Battery Recycling signifies a vital step forward in Australia's pursuit of a cleaner, more sustainable energy future. Through partnerships, innovation, and research excellence, IonDrive is proud to play a central role in shaping this transformative journey as we begin the push towards several strategic initiatives to deliver commercialisation.”

SAU congratulates The University of Adelaide on this award and establishment of the Centre, further validation of their World leading research in Battery Recycling.

The acquisition of IDT is already proving to be transformative decision by SAU. Our experience, recent team additions and track record in South Korea we believe will assist further the fast-track commercialisation of these technologies.”

The centre is a ground-breaking initiative, led by Professor Shizhang Qiao at The University of Adelaide, which aims to revolutionise Australia's battery and resources industry by establishing advanced manufacturing capabilities for recycling mixed battery materials, promoting second-life re-use, and fostering a battery circular economy.

IDT will contribute \$200,000 cash per year for five years which will be a catalyst for advancements in battery recycling technology and practices. In addition, IDT will offer in-kind contributions of \$100,000 per year, comprising support for research projects, hosting Higher Degree Research students, mentoring and training for researchers, and active participation in Centre committees and knowledge sharing activities.

Acceleration of IDT battery recycling technology commercialisation strategy

With the award of the ARC Industrial Transformation Training Centre funding, IDT as industry partner to UoA under the strategic partnership agreement, is now firmly positioned to assess opportunities to accelerate the commercialisation of not only its proprietary DES battery recycling technology, but also to develop new battery recycling technologies in partnership with other universities. Technologies developed can form a key part of the Australian governments intention to establish downstream advanced manufacturing opportunities in the battery industry of which recycling of batteries will play an important part.

<https://www.industry.gov.au/news/national-reconstruction-fund-diversifying-and-transforming-australias-industry-and-economy>

IonDrive DES technology

The University of Adelaide has developed an environmentally friendly, highly selective, re-useable deep eutectic solvent (DES) that can be used to extract lithium, manganese, nickel and cobalt from spent cathode material to produce precursor or cathode material for commercial purposes. Laboratory testing to date has achieved recoveries of over 90% for these metals. The application of the DES can significantly simplify the critical metal recovery process, lower energy consumption and selectively separate each critical metal, and uses low-cost, and environmentally friendly leaching solvents that are re-usable multiple times before replenishment is required.

About IonDrive Technologies:

IDT has a strategic partnership agreement with the University of Adelaide, leveraging of the significant investment made by the University into next-generation battery research led by world-class laureate researchers.

IDT has exclusively licensed three next-generation battery material technologies from the University of Adelaide. The exclusive license's include four international patent applications and/or Provisional Patent Applications held by the University of Adelaide.

The three next-generation battery material technologies include;

- an enhanced performance non-flammable lithium-ion based battery,
- a low-cost, environmentally sustainable method for recycling lithium batteries, and
- a low-cost, high-cycle life water-based battery.

<https://www.iondrivetech.com.au/>

Authorised for release by the Board of Southern Gold Limited.

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Southern Gold Limited: Company Profile

Southern Gold is a successful mineral exploration and battery technology commercialisation group listed on the Australian Securities Exchange (under ASX ticker "SAU"). The mineral exploration business includes 100% interest in a substantial portfolio of REE, Li and precious metals exploration projects in South Korea. Backed by a first-class technical team, Southern Gold's aim is to find world-class deposits in a jurisdiction that has seen very little modern exploration. The technology commercialisation business holds three exclusive world-wide licences comprising the next generation battery technologies comprising 1) an enhanced performance non-flammable lithium-ion based battery, 2) a low-cost, environmentally sustainable method for recycling lithium batteries, and 3) a low-cost, high cycle life water-based battery.

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