

University of Melbourne and Hancock Prospecting team up to advance carbon conversion technology

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The University of Melbourne has entered into a multi-year partnership agreement with Hancock Prospecting Pty Ltd (HPPL) to develop Carbelec™, an innovative technology that utilises electrolysis at low temperature to convert carbon dioxide (CO₂) into reusable carbon and oxygen.

Carbelec is a potential game changer for industries such as steel making as it would enable the constant capture and re-use of carbon, balancing ongoing demands for production with the reduction of CO₂ emissions in line with government mandates across the globe. By capturing and reusing the carbon in a closed cycle, many existing efficient and proven processes will become essentially zero emission. This has the potential to speed-up decarbonisation by removing the challenges of introducing numerous bespoke solutions. It is expected that commercial applications of Carbelec would utilise proven renewable energy sources to power the electrolysis process.

The University of Melbourne has successfully demonstrated Carbelec within its laboratories. The partnership with HPPL will enable refinement and then scaling up of Carbelec over a two-stage developmental program.

University of Melbourne's Dean of Engineering and Information Technology, Professor Mark Cassidy, said he was thrilled with the opportunity the new venture presented.

"This partnership will allow University of Melbourne researchers and Hancock Prospecting to establish a comprehensive Research and Development program which addresses core components to develop this exciting technology. Our aim is to combine our world leading research expertise with Hancock Prospecting's ability for real world practical deployment, and together develop this technology on an industrial scale."

Hancock Prospecting Chief Executive Officer Garry Korte said the potential benefits of Carbelec should be significant and far-reaching, noting that steel makers could continue to benefit from the reliable and consistent supply of Pilbara ores, while also achieving their decarbonisation goals with both current and emerging steel technologies.

"Hancock Prospecting's pioneering spirit is backed by a strong history of successfully partnering in innovative solutions to meet the needs of customers. We believe Carbelec can be an important part of a future low-cost energy mix, allowing industries such as steel, cement and even current day baseload power generators to continue to lift the living standards of people in Australia and worldwide."

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Hancock Prospecting Pty Ltd

Built on a long and special history of exploration and investing in Australia, Hancock Prospecting Pty Ltd (HPPL) is an independent, privately owned Australian company that has a proud history with the Pilbara and the iron ore sector and is one of the longest continuous owners of cattle stations in Australia.

Under the leadership of the Executive Chairman, Mrs Gina Rinehart, HPPL (including its majority ownership in Roy Hill) has grown into one of the most successful private companies in Australia's history, and is a diversified company group with interests in iron ore, coal, beef, dairy as well as continuing mineral exploration and development.

The University of Melbourne

Founded in 1853, the University of Melbourne is a thriving, internationally recognised, research-led University making distinctive contributions to society in research, learning and teaching, and engagement. International rankings of world universities place us as number 1 in Australia and consistently in the top 40 universities globally.

Today approximately 54,000 students study in 10 discipline-based faculties spread across eight campuses in metropolitan Melbourne and regional Victoria. The University is also a leader in cultural, environmental, medical, scientific, legal, and social research and is affiliated with many independent medical research institutes, teaching hospitals and other institutions.