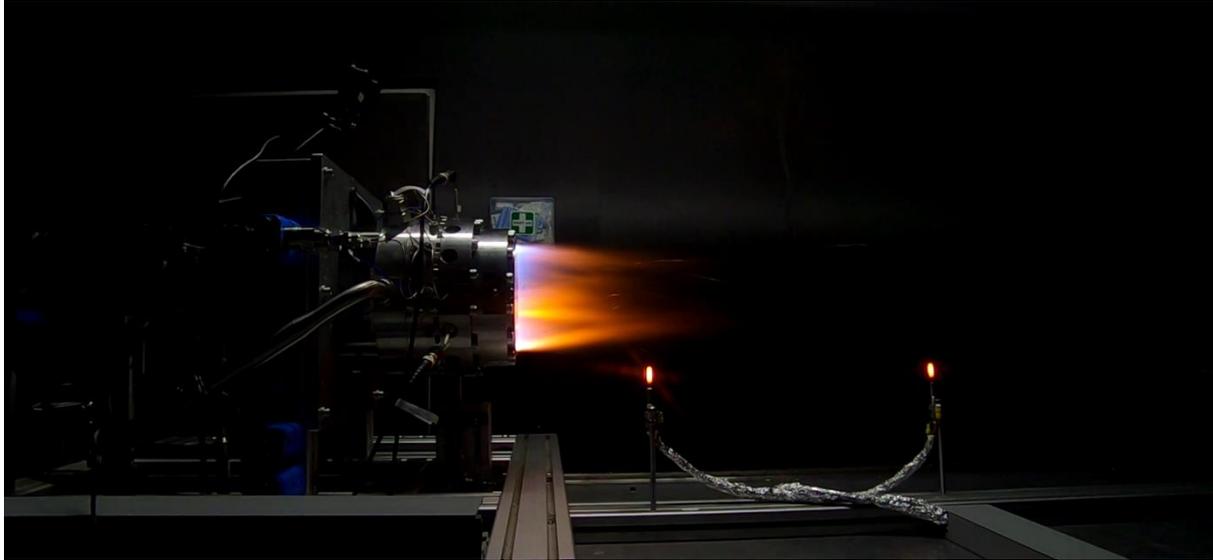


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## Breakthrough space technology for Australian research consortium sees first successful Rotating Detonation Engine test bringing Australia closer to space.



Breakthrough space technology for Australian research consortium sees first successful Rotating Detonation Engine test bringing Australia closer to a sovereign space launch capability.

Australian research consortium led by **DefendTex** last week achieved Australia's first successful test firing of a Rotating Detonation Engine (RDE) designed and developed as part of the *Cooperative Research Centre Project for Responsive Access to Space*. RDEs are a next generation propulsion technology which provide highly efficient propulsion, potentially unlocking applications such as high-speed flight or responsive space access.

DefendTex Chief Executive Travis Reddy said in relation to the successful test firing, "I am proud of the work of the researchers to achieve what is an Australian first, putting us in an elite list of countries who have successfully demonstrated this technology. With follow on efforts, this innovative Research and Development aims to provide a cost-effective alternative for responsive space access."

Mr Reddy also stated, "a few years ago, little funding and support was available for early-stage research in space technology, and through the Cooperative Research Centre Program the opportunity for collaborative engagement between academia, industry and defence has been made possible. This is allowing Australia to rapidly strengthen capability and expertise in this field to achieve game changing breakthroughs, future-proofing our economy and capturing a greater share of the space launch market".

The research, funded by the Commonwealth Cooperative Research Centre Programme would not have been possible without the support of the Australian government with contributions from DefendTex Pty Ltd, RMIT University, University of Sydney, University of South Australia, Department of Defence and international partner Universität der Bundeswehr.

Project technical lead and Senior Lecturer at RMIT University, Dr. Adrian Pudsey, said "this has been an exceptionally challenging project, but through a strong collaboration we have successfully developed a truly unique capability and demonstrated the know-how and science required to push the boundaries of this technology". There is significant excitement around these initial successes demonstrated at the RMIT operated, DefendTex rocket engine test cell.



Although this technology is in the early stages of research, future development of RDE technology could lead to an integrated space launch system enabling sovereign Low Earth Orbit launch capability allowing Australia to launch satellites and other space assets. Once commercialised, the RDE could directly benefit Australia's space industry and indirectly support telecommunications, agriculture, transport, logistics and other industries.

Mr Reddy continued, "The success of the RDE puts DefendTex and our research partners at the forefront of developing sovereign capability in propulsion system technology and high-speed flight having previously completed the *CRC-P for Hydrocarbon Fuel Technology for Hypersonic Air Breathing Vehicles* and development of the Defence funded rocket propulsion systems".

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