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MEDIA RELEASE

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Super Dots put young Australian scientist in the running for APEC science prize.

An exceptional young scientist working on new and advanced materials is Australia's nominee for a prestigious Asia-Pacific region science prize.

I am delighted that Professor Dayong Jin from the University of Technology Sydney will represent Australia in the US\$25,000 APEC Science Prize for Innovation, Research and Education (ASPIRE), for his work in optoelectronic engineering.

He was selected from a high calibre field in a national competition to pick a nominee for the APEC-wide prize that has been run by the Australian Academy of Science with support from my department for the past three years.

Professor Jin was nominated for his work to produce the world's brightest nanocrystals—called Super Dots—that can be used in single molecule detection, fibre-based remote sensing and point-of-care diagnostics.

Through a longstanding collaboration with Peking University, Professor Jin led a team of six institutes and industry partners from Australia, China, US, and Japan, and pioneered a “ τ -Dots” multiplexing technology for high-speed bio discoveries, personalized medicine, rapid pathogen detection, data storage and anti-counterfeiting.

The 2017 ASPIRE theme is new material technologies, reflecting the importance of research into developing new and advanced materials in driving scientific innovation. Nominations are open to young researchers working in materials and biomaterials science, chemical and mechanical engineering and nanotechnology, amongst other areas. The winner will be announced at a ceremony in Vietnam later this year.

As well as selecting Professor Jin, the Academy also recognised the scientific excellence of two runners-up, Dr Mohsen Rahmani from The Australian National University and Associate Professor Sharath Sriram from the RMIT University.

Dr Rahmani's recent work has led to the development of novel semiconductor nanocrystals that can be fabricated on any glass surface to allow human eyes to see in the dark.

Associate Professor Sriram's breakthrough work in nanoscale electronic memory technology mimics the way the human brain handles information. This allows the storage of multiple information states in a single memory cell, promising exceptional memory density and speeds on the scale of petabytes on a pinhead.

Since 2011, the annual ASPIRE Prize has recognised scientists under the age of 40 who are working in APEC economies and who have demonstrated a commitment to excellence in scientific research and cooperation with scientists across other APEC economies.

I thank the Australian Academy of Science ensuring Australia's world-class scientific capability is well represented in the ASPIRE Prize nominations, and I wish Professor Jin the best of luck.

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