

Joint UQ-India research harnesses light for the future



UQ is celebrating a lighting technology research partnership with Indian institutes
20 April 2017

Enabling children from remote communities to study at night will be one impact of a University of Queensland partnership that has attracted \$1 million from the Australian government, and matching funding from India.

The new lighting technology research agreement between UQ and Indian partner institutes could also potentially cut electricity costs for consumers and develop next-generation photo sensors for digital cameras.

UQ Fellow **Dr Ebinazar Namdas** (<http://researchers.uq.edu.au/researcher/2290>) from the **School of Mathematics and Physics** (<http://www.smp.uq.edu.au/>) said he was looking forward to UQ collaborating with premier Indian research agencies for initiatives utilising organic semiconductors.

"Semiconductor-based technologies are vital for both developed and developing countries and are the engines of electronics used in our daily lives," Dr Namdas said.

"In this project, Australian and Indian scientists, as well as industry, would use organic semiconductor materials that are cost-effective and environmentally friendly.

"Lighting is one of the necessities of modern living and this new technology will be more accessible not only in advanced sectors such as the automobile industry, but even in remote communities still relying on kerosene lamps."

Australian Minister for Industry, Innovation and Science Arthur Sinodinos AO and Foreign Minister Julie Bishop last week **announced** (<http://minister.industry.gov.au/ministers/sinodinos/media-releases/australia-supports-joint-research-initiative-india>) Australian funding to **seven new projects** (<http://www.science.gov.au/international/CollaborativeOpportunities/AISRF/Documents/AISRF%20Round%2010%20collaborative%20research%20projects.pdf>) under the **Australia-India Strategic Research Funds initiative** (<http://www.science.gov.au/aisrf>), with India contributing an equivalent fund.

Indian partner agencies include CSIR-National Institute for Interdisciplinary Science and Technology (NIIST) in Kerala, Indian Institute of Technology (IIT) in Mumbai, IIT in Kanpur, and Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR).

The UQ team, led by Dr Namdas, also includes Dr Shih-Chun Lo, Professor Paul Burn and Dr Elizabeth Krenske.

Australian Community of Advanced Organic Semiconductors partner, Associate Professor Christopher McNeill at Monash University in Australia, would also contribute to the project.

Professor Burn from the UQ Centre for Organic Photonics and Electronics said the ability to accurately capture images independent of the lighting environment was critical for technologies such as image recognition by computers, as well as the humble digital camera.

"This interdisciplinary program involving chemists, materials scientists, physicists, engineers and end users will provide a powerful pathway to translate fundamental research into the commercial arena," Professor Burn said.

The project would also provide a training ground to equip Australian and Indian scientists and engineers with the skills needed for delivery of the new technology.

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