

## **MEDIA RELEASE**

### **A\*STAR INSTITUTE OF MICROELECTRONICS JOINS FORCES WITH UNIVERSITY OF WASHINGTON TO PROVIDE PLATFORM TO ACCELERATE THE DEVELOPMENT OF CUTTING-EDGE SILICON PHOTONICS**

**Singapore, 16 September 2011 –**

A\*STAR Institute of Microelectronics (IME) and the University of Washington announce that they will join forces to provide shared Silicon Photonics processes as part of the Optoelectronics Systems Integration in Silicon programme (OpSIS). This will help the research and development (R&D) community significantly reduce the fabrication cost of silicon photonics integrated circuits.

Hosted in University of Washington's Institute for Photonic Integration, OpSIS is a new foundry service to facilitate R&D in Silicon Photonics technology. Under this partnership, IME will provide its in-house silicon photonics platform technology together with its fabrication and integration expertise in multi-GHz photonic devices. Such devices include integrated optical modulators and photo-detectors, edge-couplers, waveguides, array waveguide gratings (AWG), bends, couplers, ring resonators, splitters, multi-mode-interferometer (MMI), add/drop filters, crossing, and rotators. In return, the OPSIS team at University of Washington will contribute to IME's extensive silicon photonics device library, a series of very high-bandwidth devices, including photo detectors and modulators at speeds in excess of 20 GHz.

The silicon photonics integrated circuits to be created under this programme will be immediately available to the photonic research community worldwide, and in the process, facilitate technological advancements and proliferate creative ideas for the development of the next generation devices. As the platform will be offered through multi-project wafer (MPW) runs, which allow users from multiple projects to share the costs of a single fabrication run, research costs are lowered significantly for individual projects.

"As silicon photonics goes beyond R&D to become mainstream technology, IME is excited and well positioned to enable the photonics research community to take this technology to the next level to fulfill its vast potential in every area requiring high speed interconnects," notes Prof. Dim-Lee Kwong, the Executive Director of IME.

"We would like the photonics industry, 10 years from now, to function in a way that's very similar to the electronics industry today. OPSIS' shuttle runs will aid that development by reducing research and development costs by more than 100 times for an individual research team taking part," says UW's Michael Hochberg, director of the Institute for Photonic Integration and assistant professor of electrical engineering at the UW.

### **About the Institute of Microelectronics (IME)**

The A\*STAR Institute of Microelectronics (IME) is a research institute of the Science and Engineering Research Council of the Agency for Science, Technology and Research (A\*STAR). Positioned to bridge the R&D between academia and industry, IME's mission is to add value to Singapore's semiconductor industry by developing strategic competencies, innovative technologies and intellectual property; enabling enterprises to be technologically competitive; and cultivating a technology talent pool to inject new knowledge to the industry. Its key research areas are in integrated circuits design, advanced packaging, bioelectronics and medical devices, MEMS, nanoelectronics, and photonics. For more information, visit IME on the Internet: <http://www.ime.a-star.edu.sg>.

### **About the Agency for Science, Technology and Research (A\*STAR)**

The Agency for Science, Technology and Research (A\*STAR) is the lead agency for fostering world-class scientific research and talent for a vibrant knowledge-based and innovation-driven Singapore. A\*STAR oversees 14 biomedical sciences and physical sciences and engineering research institutes, and six consortia & centres, located in Biopolis and Fusionopolis as well as their immediate vicinity.

A\*STAR supports Singapore's key economic clusters by providing intellectual, human and industrial capital to its partners in industry. It also supports extramural research in the universities, and with other local and international partners.

For more information about A\*STAR, please visit [www.a-star.edu.sg](http://www.a-star.edu.sg).

### **About OpSIS and the Institute for Photonic Integration**

OpSIS is a new foundry service, hosted at the University of Washington Institute for Photonic Integration, for silicon photonics through which the community shares the cost of fabricating complex chip-scale systems across many projects.

For more information, please go to  
<http://depts.washington.edu/uwopsis/about/overview.html>

**To participate in an upcoming OPSIS-IME shuttle, send email to [opsis@uwnano.org](mailto:opsis@uwnano.org) or [Hochberg@uw.edu](mailto:Hochberg@uw.edu).**



**For UW**

**Media Contact:**

Michael Hochberg

University of Washington

Email: [hochberg@uw.edu](mailto:hochberg@uw.edu)

**Alternative Contact:**

Thierry Pinguet

DID: +1-(206) 616-4878

Email: [tpinguet@uw.edu](mailto:tpinguet@uw.edu)

**For IME**

**Media Contact:**

Cindy Chew

Institute of Microelectronics

DID: +65-6770-5375

Email: [chewwfc@ime.a-star.edu.sg](mailto:chewwfc@ime.a-star.edu.sg)

**For Technical Enquiries:**

Patrick Lo

DID: +65-6770-5705

Email: [logq@ime.a-star.edu.sg](mailto:logq@ime.a-star.edu.sg)