



News Release

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A*STAR SIMTech Sees Future in Game Changing Printed Electronics and Functional Films

SIMTech established Singapore's first Large Area Processing Research Programme as it sets sights on creating a new industry to produce innovative large area printed electronics and functional films that are cost-effective, energy-efficient and environmentally friendly. Key sectors such as advertising, building, consumer electronics, healthcare and printed media will be transformed from roll-to-roll manufacturing capability to tap the global market estimated to exceed US\$40B by 2020.

SINGAPORE, 23 November 2011: Key business leaders from the organic and printed electronics industry throughout Asia, Europe and the US converge in Singapore for the international symposium on roll-to-roll processing of printed electronics and functional films to share on advanced technologies, applications and market opportunities. Hosted by the Singapore Institute of Manufacturing Technology (SIMTech), a research institute of the Agency for Science, Technology and Research (A*STAR) and in co-operation with the Organic and Printed Electronics Association and the Singaporean-German

Chamber of Industry and Commerce, the event is held in conjunction with the roll-out of SIMTech's Large Area Processing Programme.

2. Dr Raj Thampuran, Executive Director, A*STAR's Science and Engineering Research Council said, "A*STAR researchers have made significant advancements in the field of printed electronics and I am glad that experts from all over the world are here to learn about SIMTech's newly formed large area processing programme which will launch more industry collaborations in this area and grow this sector in Singapore."

3. Emerging applications such as photovoltaics, flexible electronics and solid-state lighting which require large area functional and often flexible surfaces are the key factors driving up the demand for roll-to-roll manufacturing. With a global market valued at US\$2B in 2011 and expected to worth over US\$40B by 2020, it opens up immense commercial opportunities for key industry sectors such as advertising, building, consumer electronics, healthcare and printed media.

4. Unlike conventional semiconductor fabrication which requires batch processing of wafers, the large-area processing system involves a continuous printing press-like manufacturing process compatible with flexible polymer. Using roll-to-roll processing, functional materials can be printed on thin, light-weight, flexible and transparent plastic films. Broad industry applications include ambient lighting, portable backlight for outdoor advertising, portable signages, automotive, aerospace and buildings.

5. By leveraging on disruptive manufacturing technology platforms, SIMTech's Large Area Processing Programme aims to develop more innovative "Made in Singapore" products with novel coating, patterning, embossing web control and web inspection techniques that are not available in the industry today.

6. Dr Lim Ser Yong, Executive Director of SIMTech said, "We are collaborating closely with the print and media industries in Singapore to capture emerging market opportunities in state-of-the-art high speed printing such as inkjet printing, screen

printing and flexographic printing to deposit functional materials in roll-to-roll manufacturing processes. This will transform the printing industry into a new industry in printed electronics and functional films.”

7. Ms Julia Ng, Director of Manufacturing and Construction Division of Singapore Workforce Development Agency (WDA) said, “We are pleased to support the inaugural international symposium where advanced technologies, applications and market opportunities are shared among key business leaders. Large Area Processing is an emerging technology, which will create new employment opportunities for the workforce. To this end, WDA will continue to work closely with SIMTech to leverage this technology to build new manpower capabilities.”

8. Strategic industry-driven collaborations with key industry partners include application examples such as printed heating film for blood or liquid warming in medical applications and printed lighting film for ambient or decorative lighting in advertising and building applications.

9. SIMTech is hosting the first-ever OE-A Working Group Meeting in Asia and the Symposium on Roll-to-Roll Processing of Printed Electronics and Functional Films. The sponsors are aNexus, Coatema, Dimatix and Singapore Workforce Development Agency.

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, please visit www.a-star.edu.sg.

About the Singapore Institute of Manufacturing Technology (SIMTech)

The Singapore Institute of Manufacturing Technology (SIMTech) is a research institute of the Science and Engineering Research Council (SERC) of the Agency for Science, Technology and Research (A*STAR). SIMTech develops high value manufacturing technology and human capital to enhance the competitiveness of the Singapore manufacturing industry. It collaborates with multinational and local companies in the precision engineering, electronics, semiconductor, medical technology, aerospace, automotive, marine, logistics and other sectors.

For more information, please visit www.SIMTech.a-star.edu.sg

About the Organic and Printed Electronics Association (OE-A)

The OE-A (Organic and Printed Electronics Association) is a working group within the German Engineering Federation (VDMA) and was founded in December 2004. The OE-A is the international leading industry association for organic and printed electronics and represents the entire value chain of this emerging industry. Our members are world-class global companies and institutions, ranging from R&D institutes, component and material suppliers to producers and end-users. More than 190 companies from Europe, North America, Asia and Australia are working together to promote the establishment of a competitive production infrastructure for organic electronics. The vision of the OE-A is to build a bridge between science, technology and application. The OE-A is the host of the premier international conference and exhibition, LOPE-C, to be held June 19-21, 2012 at New Messe Munich Trade Fair Center, Germany.

Further Information and photos: www.oe-a.org and www.lope-c.com.

About Singaporean-German Chamber of Industry and Commerce

The Singaporean-German Chamber of Industry and Commerce (SGC) is part of the international network of German Chambers of Commerce Abroad (AHK), which spans across 80 countries. The SGC was established in 2004 to promote and strengthen bilateral trade through the provision of advisories, a ready network of business contacts, market intelligence and business support services.

For more information, please visit www.sgc.org.sg

About aNexus Pte Ltd

aNexus is a leading and established distributor, service provider and application center for printed technologies, including inkjet, coating, printing, curing and other advance technologies from research to production in Asia. Our line of products includes the leaders in respective field for printer, coater, flash lamp system, inks, etc, i.e. Fujifilm Dimatix, Coatema, Aixtron, Xenon, and many more.

For more information, please visit www.anexuscorp.com

Coatema Coating Machinery GmbH

For almost 40 years now, Coatema Coating Machinery GmbH has been designing and constructing coating and laminating plants for the most different applications. The portfolio ranges from small lab coating units and pilot plants for realisation of even small batches up to production plants for different applications. All lab units for small test series as well as production lines for large-scale work are manufactured to individual product and customer requirements.

For more information, please visit www.coatema.com

FUJIFILM Dimatix, Inc.

FUJIFILM Dimatix, Inc. is the world's leading supplier of drop-on-demand inkjet printheads and systems. The company's innovative inkjet technology and world-class fabrication techniques enable OEMs, system integrators and manufacturers to build cutting-edge systems and manufacturing processes for high-performance, precision printing of traditional inks and deposition of functional fluids on all types of surfaces, including flexible substrates.

For more information, please visit www.dimatix.com

Singapore Workforce Development Agency (WDA)

The Singapore Workforce Development Agency (WDA) enhances the competitiveness of our workforce by encouraging workers to learn for life, and advance with skills. This will in turn help our companies compete, and strengthen our economy.

In today's workplace, most jobs require knowledge as well as skills, which include the right attitude for the job, foundational and technical competencies. Many employers therefore look for and value workers with the right skills to do the job. Hence, WDA's role is to develop and strengthen skills-based training for adult workers to upgrade and advance in their careers and lives, over and above academic upgrading pathways.

For more information, please visit www.wda.gov.sg

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