

TWO CO-LOCATED EVENTS BRINGING YOU MAXIMUM VALUE



**WIRELESS SENSOR NETWORKS
ENERGY HARVESTING
& RFID ASIA 2010**

Printed electronics is creating new opportunities for those supplying materials and equipment to manufacture displays, photovoltaics, sensors, batteries, logic, memory and lighting. These new electronic and electrical products offer compelling benefits over existing electronics, such as by being flexible/conformal, thinner, lightweight and cheaper.

From passive RFID to Wireless Sensor Networks, Asia is becoming the biggest manufacturer and user of these devices. Progress with energy harvesting technologies allow for wireless sensors that can operate for decades because batteries are no longer the limiting factor. From monitoring the location of assets to monitoring traffic and structural integrity, the building blocks for ubiquitous sensor networks are now in place.

13-14 OCTOBER 2010, HONG KONG

PRESENTING THE LATEST INTERNATIONAL DEVELOPMENTS IN ASIA'S HUB

於亞洲樞紐展示最新的國際性發展

www.IDTechEx.com/HongKong



SPEAKERS INCLUDE:



At this event you will discover the latest technological progress, learn how the technologies are being adopted, and hear from end users about their needs. This international conference features 50 presenters, and brings together attendees from around the world at the heart of manufacturing in Asia.

BASF-SE :

"Very informative and provides a great forum for networking"

IN ASSOCIATION WITH



IDTechEx

SUPPORTING ORGANISATION



DAY 1
INTERNATIONAL KEYNOTES

IDTechEx, United Kingdom
Dr Peter Harrop / Chairman
"Printed Electronics Markets and Forecasts 2010-2020."

adidas, United States
Mr Markus Strecker/ Wearable Sports Electronics Engineering Director
"The State of Smart Fabrics Markets and Future Opportunities for Energy Harvesting."

Toppan Printing, Japan
Mr Osamu Kina
"Printable TFT Technologies for Electronic Paper."

CSIRO, Australia
Dr Doojin Vak / Research Fellow
"Organic Photovoltaics: Small Molecules and Non-Conjugated in Polymers in Printed Solar Cells."

ASTRI, Hong Kong
Dr. Ivan Sham / R&D Manager
"Challenges of Piezoelectric-Based Energy Harvesting Solution for Automotives Electronics and Consumer Electronics."

Samsung SDS, Japan
Sunghak Song / Principal Engineer
"Thinking of Location Based Services Beyond WiFi Location Tracking."

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DAY 1 / TRACK 1
NEW PRINTED ELECTRONICS PRODUCTS

Palo Alto Research Center (PARC), United States
Dr Ana Claudia Arias / Manager
"Prototyping Flexible Systems Based on Printed Components."

Printechnologies, Germany
Mr Jan Thiele / CTO
"New Products with Printed Electronics."

Sunchon National University, Korea
Prof Gyou-Jin Cho / Professor
"Roll-to-Roll Printed 13.56 MHz Operated 16-Bit RFID Tags and Smart RF Logos."

MANUFACTURING PRINTED ELECTRONICS

FUJIFILM Dimatix, United States
Mr Tim Luong / Sales Engineer
"Inkjet Deposition of Functional Materials with Dimatix Printheads and DMP Series Printers."

OTB Group, Netherlands
Mr Peter Diepens / COO
"Inkjet Printing of Functional Electronics."

NEW MATERIAL TECHNOLOGIES

Institute of Materials Research and Engineering (IMRE), Singapore
Dr Beng Ong / Principal Scientist, Director
"Printed Electronics Developments in Asia."

Hitachi Chemical, Japan
Mr Yasushi Kumashiro / Senior Researcher
"Materials for Printed Electronics Device."

NanoMas, United States
Dr Zhihao Yang / President & CTO
"Conductive Nanoparticle Inks for Flexible and Printable Electronics."

Delo, Germany
Dr Daniel Lensen / Business Development Manager
"Low WVTR Sealants for Organic Electronics Applications."

Intrinsic Materials, United Kingdom
Dr Richard Dixon / Chief Operating Officer
"Breakthrough in Conductive Nanomaterial Inks for Printed Electronics and PV Applications."

DAY 1 / TRACK 2
WIRELESS SENSOR NETWORKS & CASE STUDIES

EnOcean GmbH, Germany
Mr Armin Anders / Co-Founder & Vice President of Product Marketing
"EnOcean - Integrated Approach for Energy Harvesting Wireless."

Dust Networks, United States
Ms Joy Weiss / President and CEO
"Wireless RTLS Mesh Networks: No Wires Required."

JV-Nexus, Hong Kong
Dr Tan Li / Engineering Director
"Wireless Sensor Networks For Environmental Monitoring."

Schneider Electric, France
Dr Fabrice Roudet / Project Manager - Thermal Diagnostic
"ZigBee Energy Harvested Sensors."

University of Hong Kong, Hong Kong
HN Lam / Associate Professor
"Integrated Building Facility Management Based on Ambient and Artificial Intelligence."

PRINTED ENERGY HARVESTERS

Uni of Hong Kong, Hong Kong
Prof Choy
"Organic Resonant Tunnelling Diodes."

University of Manchester, United Kingdom
Prof Aimin Song / Professor of Nanoelectronics
"Single-Layered Printable TeraHertz Nanodiodes for Energy Harvesting."

ENERGY HARVESTER TECHNOLOGIES

Chinese University of Hong Kong, Hong Kong
Prof Wei Hsin Liao / Programme Director
"Energy Harvesting from Vibration Using Piezoelectric Materials."

ASTRI, Hong Kong
Dr. Ho-Yin Chan / R&D Senior Engineer
"Wind Energy Harvesting in Hong Kong's Landscapes."

Sinoceramics, Hong Kong
Dr LS He / Principal Engineer
"Novel Electronic Components for Wireless Sensor Networks."

Peking University, China
Prof S Dong
"Piezoelectric and Magnetolectric Transducers for Mechanical and Magnetic Field Energy Harvesting."

ECO Engineering,
Mr Kenneth Sung / General Manager
"Road to HK\$1/kWh."

IDTechEx, UK
Peter Harrop / Chairman
"Energy Harvesting & WSN 2010-2020."

COMPANY TOURS

12 October



ASTRI
www.astri.org



RFID CENTRE
www.scic.org

15 October



HKUS&T
www.ust.hk



electronicAsia
www.hktdc.com

PV Testing Lab
www.ust.hk

See website for more details: www.IDTechEx.com/HongKong

EXHIBITORS



DAY 2
FLEXIBLE/PRINTED DISPLAY TECHNOLOGIES

E Ink, Hong Kong
Mr David Keefe / Director of Sales
"The Market and Development of ePaper Display Technology."

Liquavista, Hong Kong
Mr Anthony Slack / VP Commercial
"Colour Display Technology."

Bridgestone, Japan
Mr Yoshitomo Masuda / Electronic Displays Manager
"Electronic Paper QR-LPD."

Hong Kong University of Science & Technology, Hong Kong
Prof Vladimir G Chigrinov
"Optically Rewriting: A New Printing Method on Glass and Plastic Substrates."

Kent Displays, United States
Mr Joel Domino / President
"Flexible Bistable Reflex Displays and Applications."

PRINTED ELECTRONICS MARKETS AND OPPORTUNITIES

Thin Film Electronics
Dr. Davor Sutija / CEO
"Next Generation of Printed Non-Volatile Rewritable Memories and Integration with Sensors and Displays."

PROGRESS WITH RFID

LSCM R&D Centre, Hong Kong
Dr Frank Tong / Director Research & Technology Development
"Internet of Things and Applications to Supply Chain Management."

LSCM R&D Centre, Hong Kong
Dr Terry Ye / Director Research & Technology Development
"Building Ubiquitous RFID Systems."

UR RFID Ltd, Hong Kong
Mr. Bo Gao / Director
"Heat Transfer Passive UHF RFID Tag for Apparel Application."

PHOTOVOLTAICS

Centrotherm photovoltaics, Sweden
Dr Georg Ritter / Technical Sales Thin Film Division
"Standard Turnkey Production Line for CIGS Thin Film PV Modules on Glass Substrates and Opportunities for Production of Thin Film Modules on Flexible Substrates with Roll-to-Roll Equipment."

ASTRI, Hong Kong
Dr. Wei Zhou / R&D Senior Engineer
"High Concentration Photovoltaics (CPV): Potentials and Challenges."

IDTechEx, Germany
Dr Susann Reuter / Director
"Photovoltaics: Markets, Technologies, Opportunities 2010-2020."

Muehlbauer Smart Identification Technology (Shanghai), China
Sun Bin / General Manager, RFID Smart Label
"Competence in Solar Technology - Muehlbauer's Assembly Line for Thin Film Solar Technology."

ENERGY STORAGE

Infinite Power Solutions, United States
David Squires / VP, Strategic Marketing
"Thin-Film Micro-Energy Cells as the Ideal Energy Storage Solution for Self-Powered Wireless Sensor Nodes."

MORE INFO:
www.IDTechEx.com/HongKong

AWARDS

The IDTechEx awards will recognise company development and success and are hosted by IDTechEx, a leader in providing independent global research and analysis on the development and application of printed and potentially printed electronics (organic, inorganic, composite), energy harvesting, RFID and wireless sensor networks

- Best of Printed Electronics
- Best of Energy Harvesting
- Best of RFID/WSN
- Best in Show

HEALTHCARE AND FOOD SAFETY

Food Project - Chinese University of Hong Kong, Hong Kong
Dr Tobun Dorbin Ng / Project Manager
"Sensing Surrounding Changes for Managing Risk in Food Safety and Patient Care."

The conference, exhibition and masterclasses will take place at the Hong Kong Science Park. Conveniently situated amidst beautifully landscaped open spaces in Shatin, with a magnificent panoramic view over Tolo Harbour



Lakeside 2 / The Auditorium, Hong Kong Science Park, Pak Shek Kok, Shatin, Hong Kong

MASTERCLASSES / 12 & 15 OCTOBER

These six optional Masterclasses are interactive consultancy sessions. At each Masterclass you will have the chance to handle many samples, have your specific questions answered by impartial experts, and take away printed copies of the presentations.

Masterclass 1 (12 October)

Printed Electronics: Markets, Technologies and Opportunities

Designed for those who are new to this disruptive technology or need to understand the big picture to assess the challenges and opportunities, this Masterclass will arm you with the latest knowledge of the applications and technology developments involving printed electronics. **The session will cover:**

- Applications of printed electronics - now and near future
- Lessons to be learnt from early successes and failures
- The need for printed electronics
- Assessment of technologies, companies, strategies
- Batteries and actuators
- A discussion of manufacturing techniques, their relevancy and challenges
- Challenges and the roadmap to the full printed electronics toolkit

Masterclass 3 (12 October)

Printing Technologies and Materials for Printed Electronics

Printed electronics can utilize any solution-based material including organic semiconductors, inorganic semiconductors, metallic conductors, nanoparticles, nanotubes and more. This technical masterclass looks at the full range of these different materials, comparing for each one the available chemistries, performance, cost, printability, lifetime and multiple other parameters. The impact of using different print techniques (inkjet, gravure, etc) and substrates (paper, plastic, glass, etc) are also considered. In addition, we look in detail at the printing technologies, demystifying the how, where, why and what next, bringing the subject alive with many real world examples. We go through inkjet printing, gravure, flexo, litho, DPN, screen and other types assessing their relevance to printed electronics. It is all covered here by experts in material development and printing technologies.

Masterclass 5 (15 October)

Displays & Lighting

Displays will be one of the largest market segments in printed/organic electronics. Already 70% of the MP3 flash memory music devices use an OLED display but TVs are now the target. However, OLEDs are just the tip of the iceberg with electroluminescent, electrophoretic and electrochromic displays with unique benefits being commercially used now. Within ten years we will also see another major development - conventional lighting being replaced with lighting that is laminar and flexible.

This masterclass will guide you through the full range of technologies, market opportunities, challenges and issues to be resolved. The IP situation will also be covered as will companies in the value chain, along with their positioning and strengths.

Masterclass 2 (12 October)

An Introduction to Energy Harvesting, Energy Storage and Wireless Sensor Networks

Energy harvesting is the use of technologies to generate electricity from the environment, which can be used to power electronics and electric devices. Different technologies can be employed depending on the energy source. For movement, mechanical harvesters can be used (which can work from electrostatic, piezoelectric and electromagnetic movement) and other sources include light, thermal, EM transmission or human. This masterclass covers all the technologies involved, how they work, and appraisal of their strengths and weaknesses, relative costs and developments paths. The leading developers are given as are market needs and IDTechEx forecasts.

Masterclass 4 (12 October)

Commercialisation Opportunities for RFID, Wireless Sensor Networks & Energy Harvesting

This masterclass covers the realities of the RFID and WSN market. What correlates with success? What makes investors invest? See the league table of the largest RFID companies and lessons of how they got there. Who is rapidly climbing up the league table and why? **The session covers:**

- V curve of profit, Boston matrix and other tools to position you optimally in the market
- Hot countries, technologies and positions in the value chain for profit
- Case studies
- Who will be the global winners in the future and why
- Large profitable niches and how to spot new ones
- Cash traps, warning signs and lessons of failure
- The boom in RFID acquisitions analyzed and what comes next
- Markets and applications for WSN and energy harvesting
- Ten year forecasts 2010-2020

Masterclass 6 (15 October)

Thin Film Photovoltaics

This masterclass is designed to give an overall picture of photovoltaic technologies, from basic principles all the way to current advances. The masterclass is structured as follows:

- Photovoltaics: basic principles and operation.
- Heterojunctions
- After an overview of underlying principles, further details will be given on specific technologies:
 - » Organic and hybrid organic/inorganic photovoltaics
 - » Dye-sensitised solar cells, and Thin film technologies (e.g. amorphous silicon, CdTe, CIGS)
 - » III-V/ II-VI multijunctions
- Advances / cutting edge applications
- Market analysis and ten year forecasts

These are the issues the event will address for you:

- What are the strengths and weaknesses of companies in East Asia?
- What do they need that you can supply?
- What are they doing right now?
- Who are the right contacts in these massive organizations?
- How are the projects being funded and what level of funding is available?



If you have any queries, please contact:

Corinne Jennings / Event Director

c.jennings@IDTechEx.com

Tel: +44 (0)1223 813703 Fax: +44 (0)1223 812400

REGISTRATION

BEST VALUE PACKAGES

Package A - 2 Day Conference and 2 Masterclasses	<input type="checkbox"/>	US\$1050
Package B - 2 Day Conference and 3 Masterclasses	<input type="checkbox"/>	US\$1350
Package C - 2 Day Conference and 4 Masterclasses	<input type="checkbox"/>	US\$1600

CONFERENCE & EXHIBITION

2 day conference and exhibition	<input type="checkbox"/>	US\$500
Exhibition Only Pass	<input type="checkbox"/>	FREE

OPTIONAL SESSIONS

Masterclass 1: Printed Electronics: Markets, Technologies and Opportunities	<input type="checkbox"/>	US\$350
Masterclass 2: An Introduction to Energy Harvesting, Energy Storage and Wireless Sensor Networks	<input type="checkbox"/>	US\$350
Masterclass 3: Printing Technologies and Materials for Printed Electronics	<input type="checkbox"/>	US\$350
Masterclass 4: Commercialisation Opportunities for RFID, Wireless Sensor Networks and Energy Harvesting	<input type="checkbox"/>	US\$350
Masterclass 5: Displays and Lighting	<input type="checkbox"/>	US\$350
Masterclass 6: Thin Film Photovoltaics	<input type="checkbox"/>	US\$350

FOR THOSE NOT ATTENDING THE CONFERENCE

Conference Proceedings Only	<input type="checkbox"/>	US\$499
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See website for current earlybird prices: www.IDTechEx.com/HongKong

TOTAL:

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Terms & Conditions

Hotel and travel costs are not included in the price. Substitutions may be allowed at any time but please let us know. Cancellations must be made in writing 28 days before the event, upon which a 15% cancellation fee is payable. If a cancellation is made less than 28 days before the start of the event, no refund will be given. IDTechEx reserves the right to alter the location or content of the event at any time. IDTechEx retains the right of refusal. Only one promotional code may be used per purchase. The information in this brochure was correct at time of going to print but all prices and programmes may be subject to change.

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ENERGY HARVESTING
& RFID ASIA 2010**

13-14 OCTOBER 2010, HONG KONG
**PRESENTING THE LATEST
INTERNATIONAL DEVELOPMENTS IN ASIA'S HUB**
於亞洲樞紐展示最新的國際性發展

Greetings,

Welcome to this year's IDTechEx events in Asia, one of the most vibrant territories for innovation. Co-organized by ASTRI and LSCM Hong Kong, these truly international events will give you the opportunity to discover all the latest developments in a wide range of sectors. Something made possible due to the co-location of two events on some of the most exciting technology sectors, covering printed electronics and wireless sensor networks, RFID and energy harvesting.

For those seeking opportunities for new products, material and equipment supply, or just to understand the requirements from different industries, these events cover it all. You will meet customers and suppliers, based locally and internationally, and will come away with knowledge of the latest progress in these fast-paced industries.

I hope you are able to attend, and We look forward to meeting you there.



Peter Harrop
Chairman



Ivan Sham
R&D Manager



Dr Frank Tong
Director, Research & Technology Development



www.IDTechEx.com/HongKong



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ALL ATTENDEES RECEIVE
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SENSORS & INSTRUMENTATION KTN

"Some great presentations in real world practical implementation of Energy Harvesting, and some fascinating new technologies, too."

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