



4<sup>th</sup> Annual

# ORGANIC PHOTOVOLTAICS

Wednesday, April 28 – Friday, April 30, 2010  
Doubletree Hotel Philadelphia, Philadelphia, PA, US

## With participation from

- AIR PRODUCTS
- COATEMA
- KONARKA
- MOSER BAER
- NANOMARKETS
- NATIONAL RENEWABLE ENERGY LABORATORY
- NAVIGANT CONSULTING
- NEW JERSEY INSTITUTE OF TECHNOLOGY
- PLEXTRONICS
- SOLARMER ENERGY INC
- STANFORD PHOTONICS RESEARCH CENTER
- UNIVERSITY OF DENVER
- UNIVERSITY OF GRONINGEN
- UNIVERSITY OF HOUSTON

### Sponsors/Exhibitors:



### Media partners and supporters



**Book before Friday, April 2, 2010 and  
save 10% off the conference fee!**

Visit the website at  
[www.opvconference.com](http://www.opvconference.com)  
to register now.

2009 has seen much progress towards the commercialization of OPV technology, with products such as backpacks that charge your cell phone, bus stop roofs that power displays, and other applications utilizing the benefits of organic photovoltaic technology. According to many predictions, we are close to the mass market production of OPV-based commercial applications. However, with much of the work still in research and development, interaction among academics and scientists who are making advances in materials and technologies is critical for continuing the creative process. In its current stage of development, OPV is an attractive investment opportunity with near-term products anticipated for high-end niche applications and continual progress toward on-grid power generation.

Now in its fourth year, **Organic Photovoltaics 2010** will bring together industry experts, researchers and investors to address the opportunities and most critical challenges for the commercialization of OPV technologies. With 17 presentations, one half-day seminar and numerous networking functions, this important technical and business conference is the year's must-attend event for anyone interested in the advancement of organic photovoltaics!

## Who should attend?

**Materials scientists:** Discover the latest materials developments and share your own innovations with fellow scientists and manufacturers.

**University researchers:** Discuss current research, recent results and future projects with colleagues and network with potential business partners and investors who can assist in making your work a commercial reality.

**Angel investors, venture capitalists and investment firms:** Get updated on the latest technical advances and identify new investment opportunities.

**Solar cell and module manufacturers:** Gain insight into market dynamics and consumer demands and network up and down the value chain with material innovators and potential customers.

**Intelligent fabric, portable electronic, smart sensor, RFID, power generation and other product designers and developers:** Find out about the latest advances and expected near-term developments in organic solar technologies that can be integrated into your products.

### Hear what participants had to say about past IntertechPira Organic Photovoltaics events:

*"This conference remains the best OPV conference, especially on the industrial aspects."*

**National Research Council of Canada**

*"I got a perspective on the current state of development in the OPV industry. It seemed to attract the leaders in the field who openly discussed the state of their work."*

**Nanoholdings LLC**

*"Great forum for a good overview of OPV technology development and commercialization."* **NRC Canada**

*"Wide perspective on OPV: market potential, technology and scientific development issues. A must-attend."*

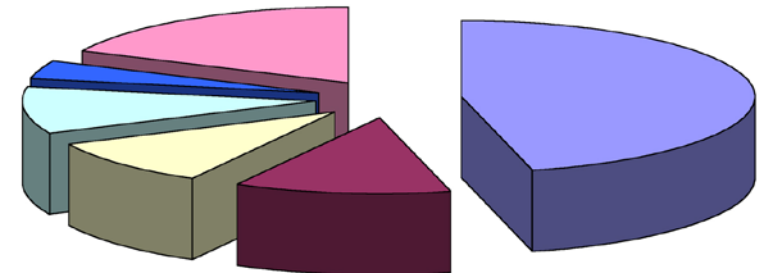
**SAES Getters SpA**

*"Very promising to see all of the skilled teams working on new materials; good perspectives for OPV development."*

**ARMOR SA**

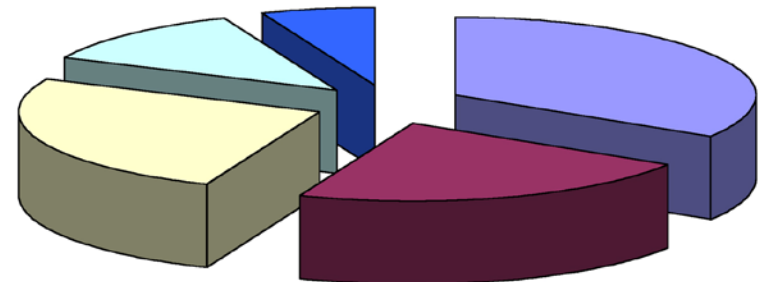
## Attendee profile

### by company type



- Materials providers— silicon, glass, semiconductor polymers
- Cell/Module manufacturers
- Component suppliers
- Printed electronics suppliers and developers
- Consultants, venture capitalists
- Gov't, academics, associations, media

### by job title



- Chemist, Engineer, R&D, Scientist
- Sales and Marketing
- Management
- Academic/Assoc/Consult/VC
- Did Not Specify

## social media spotlight

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 Twitter and LinkedIn pages>>



## An introduction to organic photovoltaic technology

Wednesday, April 28, 1:30pm – 5:00pm

This workshop will provide an overview of organic photovoltaic technology for those delegates who are new to the OPV industry, need a refresher course, handle the business side of OPV and would like an insight into the technology, or delegates who would simply like an overview of the industry. Embodying a true classroom style atmosphere, this three hour workshop will cover the following topics:

- What makes OPV technology unique from other solar energy?
- Benefits of OPV technology – flexibility, color, etc.
- Challenges associated with OPV technology – degradation, efficiency, etc.
- Common applications of the technology

**Check back often to [www.opvconference.com](http://www.opvconference.com) for conference updates, including information about our seminar leader!**

### Save the date! Upcoming IntertechPira Webinars



Keep an eye out for information about related upcoming webinars:

**Dye Sensitized Solar Cells** April  
**Recycling for Photovoltaics** June  
**Antireflection and Light Capturing Technologies in PV to Increase Efficiency** September

### Attend Organic Photovoltaics 2010 for FREE as an IntertechPira member!

All IntertechPira members get 3 free conference places at this conference and our other plastic electronics events:

**Smart Fabrics** (April 14-16, Miami)

**OLEDs** (September 27-29, San Francisco)

Membership also includes extensive access to our wide range of ebooks, journals, webinars and training modules. Contact **John Buss** at **+1 202 309 7296** or **[john.buss@pira-international.com](mailto:john.buss@pira-international.com)** for more information.

### Intertech Pira's e-Learning series delivers high-value information to your desktop



e-Learning is a natural extension of the events, publications and consultancy already offered by IntertechPira. Driven by growing requests for high-value educational opportunities and timely information, IntertechPira's e-Learning offers a wide array of online events. These online seminars, or webinars, compliment our 2010 events agenda, while providing participants with a competitive advantage in an easy-to-digest format.

Webinars vary in length from 30-120 minutes, and are offered live with interactive question and answer periods. There is no software to install, and the webinar is available directly from your internet browser. IntertechPira e-Learning events are also available to view on-demand.

Our e-learning event list is updated frequently to ensure we are on top of evolving technologies. Please check the e-learning tab of **[www.intertechpira.com](http://www.intertechpira.com)** often to guarantee you don't miss out.

**IntertechPira Webinars are available live, and on-demand on our website [www.intertechpira.com](http://www.intertechpira.com)**

**To receive information on webinars, and find out how you can be involved please contact:**

Chandra Guyot

[chandra.guyot@pira-international.com](mailto:chandra.guyot@pira-international.com)

phone: +1 207 781 9602

## Day one - Wednesday, April 28, 2010

- 12:00** Registration
- 1:00** Pre-conference Workshop (separate fee required)  
**An Introduction to Organic Photovoltaic Technology**  
 TBD

## Day two - Thursday, April 29, 2010

- 8:00** Continental breakfast
- 9:00** Conference opening remarks  
**Valerie King, Conference Producer**  
**INTERTECHPIRA**
- 9:05** Opening remarks from conference chair  
**Russell Gaudiana, VP Research**  
**KONARKA TECHNOLOGIES**

### Session 1: Market Overview and Progress towards Commercialization

- 9:15** **Organic PV - The Road to Competitiveness**
- OPV competitiveness versus crystalline and thin films - can OPV out-manuever higher efficiency technologie?
  - Appropriate applications for OPV and customer acceptance - it's all about the end user
  - Pricing and technology revenues moving forward - or, sustainable margins in a tough market
  - Five year forecasts - what the future holds for everything solar
- Paula Mints, Principal Analyst, NAVIGANT CONSULTING PV SERVICES PROGRAM, Associate Director, NAVIGANT CONSULTING**
- 9:50** **Addressing Today's Market Opportunities with Plexcore Ink Systems**
- Today's market opportunities for OPV, what comes before on-grid power?
  - Addressing limitations of today's PV technology, how does OPV deliver new value?
  - Plexcore PV ink systems designed to deliver OPV for today's market opportunities
- Mary Boone, Market Development Director**  
**PLEXTRONICS**

- 10:25** **Solar Industry Overview and Market Future**
- The solar industry over the next 5 years
  - How OPV compares to other solar technologies
- TBD, Analyst**  
**NANOMARKETS**
- 11:00** Morning networking break
- 11:30** **Financing and Investment Opportunities for OPV**
- Where is the funding coming from for OPV?
  - How can you take advantage of the opportunities
- TBD**

### Session 2: Updates in OPV Technology and Applications

- 12:05** **OPV Device Physics and Pathways to Higher Efficiencies**
- Recent progress in understanding OPV device physics
  - Development of open-source OPV device models
  - Pathways to higher efficiencies
  - Strategies for optimal materials and device discovery
- Dr. Sean Shaheen, Associate Professor**  
**UNIVERSITY OF DENVER**
- 12:40** Roundtable luncheon
- 2:10** **Carbon Nanotubes -C60 Complex for Organic Photovoltaic Cells**
- In a carbon nanotube-C60 complex, the C60 acts as an electron acceptor and the nanotube as the charge carrier
  - Important underlying technologies are the purification and functionalization of carbon nanotubes
  - The chemistry and solubility of these complexes and post processing steps are important consideration for device fabrication
- Dr. Somenath Mitra, Professor**  
**NEW JERSEY INSTITUTE OF TECHNOLOGY**
- 2:45** **Third Generation Solar Photon Conversion to Electricity and Fuel: Multiple Exciton Generation in Colloidal Quantum Dots; Quantum Dot Arrays and Solar Cells**
- More efficient, future generation solar cells through the utilization of the unique properties of quantum dot (QD) nanostructures
- Dr. Arthur J. Nozik, Senior Research Fellow**  
**NATIONAL RENEWABLE ENERGY LABORATORY (NREL)**

- 3:20** **Technology Update: Fullerenes**  
**Prof. J.C. (Kees) Hummelen, Professor**  
**UNIVERSITY OF GRONINGEN**
- 3:55** Afternoon networking break
- 4:30** **TBD**  
**Dr. Thomas Baer, Executive Director**  
**STANFORD PHOTONICS RESEARCH CENTER,**  
**STANFORD UNIVERSITY**
- 5:05** **PANEL: The Future of OPV Technology**
- 5:50** Networking Reception

## Day three - Thursday, April 29, 2010

- 8:00** Continental breakfast
- 9:00** Conference opening remarks  
**Valerie King, Conference Producer**  
**INTERTECHPIRA**
- 9:05** Mid-conference summary and announcements  
**Russell Gaudiana, VP Research**  
**KONARKA TECHNOLOGIES**
- 9:15** **Transparent Contacts for Organic Solar Cells**
- Nanostructured transparent contacts
  - Selection criteria for transparent contacts
  - OPV device performance on SWNT contacts
  - OPV device performance on metal nanowire networks
- Dr. Teresa Barnes, Senior Scientist**  
**NATIONAL RENEWABLE ENERGY LABORATORY (NREL)**

### Session 3: Overcoming Degradation and Other Challenges

- 9:50** **Challenges in OPVs and How New Device Designs Can Enhance Cell Output**  
**Dr. Seamus Curran, Professor**  
**INSTITUTE FOR NANOENERGY,**  
**UNIVERSITY OF HOUSTON**
- 10:25** **Recent Progress in OPV Technology**
- Materials development
  - Process development
  - Products and applications
- Dr. Zheng Xu, Senior Researcher**  
**SOLARMER ENERGY, INC**

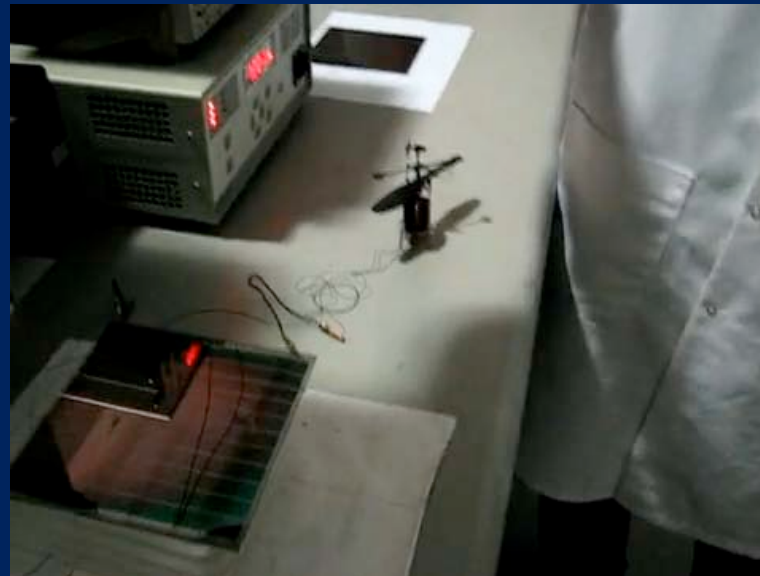
- 11:00** Morning networking break
- 11:30** **Overcoming the Challenge of Degradation**  
**Dr. Matthew Lloyd, Scientist**  
**NATIONAL RENEWABLE ENERGY LABORATORY (NREL)**

### Session 4: Future Trends, Applications and Opportunities

- 12:05** Roundtable luncheon
- 1:30** **New Materials Development for High-Efficiency Ink Systems**
- Approach to materials development for OPV
  - Addressing OPV lifetime through improved inherent stability of materials
  - Increasing OPV efficiency with new ink systems
- Shawn Williams, Vice President of Technology**  
**PLEXTRONICS**
- 2:10** **Production Technology for Flexible PV - Trends and Technologies**
- An overview of the printing and coating systems in use today
  - Flexible pilot coaters concepts
  - Clean room activities for OPV
  - Inert coating technologies
  - Facess, a European FP7 project description of which includes a printed sensor in combination with OPV and a printed battery
- Thomas Kolbusch, Vice President, COATEMA**  
**Member of the Board of Directors, OE-A**
- 2:45** **OPV Products for Off-Grid Markets**
- Status of Moser Baer's PV business
  - Off-Grid market potential in India
  - OPV & the off-grid opportunity
  - Status of OPV R&D at Moser Baer India
- Gopalan Rajeswaran, Group Chief**  
**Technology Officer, MOSER BAER**
- 3:20** Closing remarks
- 3:30** Conference adjourns



**Konarka manufacturing  
organic thin film solar cell  
modules**



**Watch as Solarmer Engineer,  
Casey Irvin, demonstrates how  
the companys organic solar cell  
powers a helicopter.**

## Branding Sponsorship Opportunities

### All sponsorships include:

- Exhibit table in the exhibit area
- Your logo on the **Organic Photovoltaics 2010** webpage with a link to your website
- Two mentions of sponsorship from the podium at the event
- Complete attendee list provided before and after the conference
- Your name in all promotional materials
- Company description in conference proceedings
- Two Guest Passes to the exhibit area

### Conference Message Board Sponsorship **\$3,500**

(One available)

Your company's logo will be featured on message board placed near entrance of conference room

- One registration to the conference

### Conference Pens Sponsorship **\$5,000**

(One available)

Your company's logo will be featured on the conference pens distributed at the opening of the conference

- One registration to the conference

### Conference Lanyards Sponsorship **\$5,000**

(One available)

Your company's logo will be featured on conference lanyards distributed during registration

- One registration to the conference

### Travel Coffee Mugs Sponsorship **\$5,000**

(One available)

Your company's logo will be featured on conference travel coffee mugs distributed during registration

- One registration to the conference

### Laptop/Notebook Giveaway Sponsorship **\$5,000**

(One available)

A person from your company will present the lucky winner with a laptop at the end of the conference

- One registration to the conference

### Conference Padfolio Sponsorship **\$5,000**

(One available)

Your company's logo will be featured on the cover of recycled paper conference pads distributed during the plenary session at the opening of the conference

- One registration to the conference

### USB/Conference Workbook/ Post-Conference Link Sponsorship **\$7,000**

(One available)

Your company's logo will be featured on the USB drive, plus the cover of the workbook proceedings distributed to all participants during registration, plus your logo on the post-conference link.

- One registration to the conference

## Function Sponsorship Opportunities

### All sponsorships include:

- Exhibit table in the exhibit area
- Your logo on the **Organic Photovoltaics 2010** webpage with a link to your website
- Two mentions of sponsorship from the podium at the event
- Complete attendee list provided before and after the conference
- Your name in all promotional materials
- Company description in conference proceedings (1/2 page)
- Two Guest Passes to the exhibit area

### Continental Breakfast Sponsorship **\$4,000**

(One available) Thursday, April 29, 2010 AND Friday, April 30, 2010

- Exclusive sponsorship of Day 1 AND Day 2 continental breakfast
- One registration to the conference
- Prominent signage with sponsor logo promoting your sponsored event
- Logo on beverage napkins

### Refreshment Break Sponsorship **\$4,500**

(Two available) Thursday, April 29, 2010 or Friday, April 30, 2010

- Exclusive sponsorship of Day 1 or Day 2 refreshment breaks
- One registration to the conference
- Prominent signage with sponsor logo promoting your sponsored event
- Logo on beverage napkins

### Roundtable Luncheon Sponsorship **\$5,500**

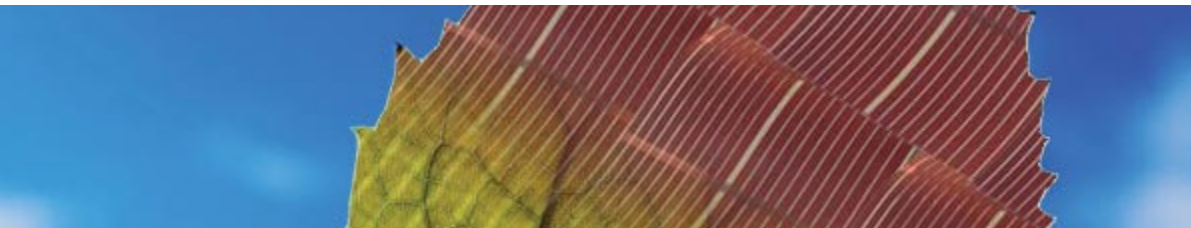
(Two available) Thursday, April 29, 2010 or Friday, April 30, 2010

- Exclusive sponsorship of the three-course Roundtable Luncheon on Day 1 or Day 2
- One registration to the conference
- Listed as luncheon sponsor on all promotional material
- Prominent signage with sponsor name/logo promoting your sponsored event
- Table tent card with logo placed on the tables

### Reception Host Sponsorship **\$6,500**

(Two available) Wednesday, April 28, 2010 or Thursday, April 29, 2010

- Exclusive sponsorship of Evening Networking Reception
- One registration to the conference
- Prominent signage with sponsor name/logo promoting your sponsored event
- Full-page company profile in conference proceedings (1 page)
- Logo on beverage napkins



## The venue

Home to Independence Hall, the Liberty Bell and many other famous landmarks, Philadelphia is a modern city that proudly honors its historic past. The Doubletree Hotel Philadelphia is centrally located in the heart of Philadelphia's cultural district on the Avenue of the Arts. Across from the Academy of Music, the hotel is within walking distance of many of Philadelphia's attractions including the shops and restaurants on historic Rittenhouse Square, Independence Hall, Constitution Center and the Liberty Bell. With its full service business center, including fax machines, printers and photocopiers, speakers and delegates can conveniently utilize these amenities during their stay. In addition, the Philadelphia International Airport is just nine miles (approximately a 20 minute drive) away.



### Venue address

Doubletree Hotel Philadelphia  
237 Broad Street  
Philadelphia, PA 19107-5686  
www.philadelphia.doubletree.com

## Accommodation

Speakers and delegates are responsible for booking their own travel and accommodation. A limited number of rooms have been reserved for speakers and delegates wishing to stay at the Doubletree Hotel Philadelphia at a special rate of **\$179 plus taxes**. Rooms must be reserved no later than **Wednesday, April 7, 2010** to take advantage of this special rate. To book your accommodation, please contact the hotel directly at **+1 215 893 1600**. Please state that you're attending the IntertechPira **Organic Photovoltaics 2010** conference to receive the preferential rate. Your conference registration confirmation will include a web link to facilitate your hotel reservation.

## Conference fees

The conference fee includes entry to the conference sessions and the exhibition, conference proceedings CD, luncheons, receptions and refreshments. However, fees do not include delegate travel and accommodation. All credit card orders are processed at that day's E/€//\$ exchange rate at the time the transaction goes through. **PLEASE NOTE:** In order to receive the discounted price, Early Bird registration fees must be paid at time of purchase. If you have any questions regarding this policy, please contact John Buss at +1 202 309 7296 or john.buss@pira-international.com.

## Cancellations

Cancellations will be accepted and fees will be refunded (less 20% handling charge) only if made in writing and received ten working days before the event. Bookings cannot be cancelled or fees refunded thereafter. Substitutions may be made at any time, please notify John Buss at john.buss@pira-international.com or +1 202 309 7296.

## Note

IntertechPira does not accept liability for any loss of or damage to the personal effects of delegates attending the conference. IntertechPira reserves the right to cancel, defer or modify the event proceedings without prior notice. If you have sent a booking to us and have not received confirmation, please contact Laura Preston at laura.preston@pira-international.com or +1 207 781 9613.

## Visas

Delegates requiring visas should request a visa invitation letter from IntertechPira at the time of registering for the event, ensuring sufficient time is left for applications to be completed. Delegates are then responsible for contacting the relevant/appropriate embassy themselves. IntertechPira can do nothing further to assist in this process.

**Any questions about the information above, please contact Laura Preston at laura.preston@pira-international.com or +1 207 781 9613.**

## Exhibition opportunities

IntertechPira's **Organic Photovoltaics 2010** offers a unique opportunity to showcase your products and services all while accessing the leaders in this industry. Depending on your goals a benefits package can be designed to target a narrow audience or a broad group and may include event recognition as well as publicity, marketing, promotional opportunities and complimentary event passes. For more information on our many exhibition opportunities that meet your business goals, please contact Brian Santos at: **brian.santos@pira-international.com or +1 207 781 9618**



## Your event organizer

IntertechPira provides events, market research, publications, strategic and technical consulting to niche, emerging and high growth industries. Market coverage includes lighting and displays, alternative energy, home and personal care, industrial biotechnology, performance materials and chemicals. IntertechPira is a division of Pira International. Visit [www.intertechpira.com](http://www.intertechpira.com) for more information.

## CONFERENCE PRICING

|   |               |
|---|---------------|
| <b>Early Bird Registration</b><br>(through Friday, April 2, 2010) | <b>\$1249</b> |
| <b>Regular Conference Fee</b><br>(April 3 - April 27, 2010)       | <b>\$1399</b> |
| <b>On-Site Conference Fee</b><br>(April 28 - 30, 2010)            | <b>\$1499</b> |
| <b>Workshop</b>   | <b>\$499</b>  |
| <b>Academic/Gov't</b>   | <b>\$899</b>  |
| <b>Proceedings</b>  | <b>\$999</b>  |
| <b>Tier 1 Exhibit</b>   | <b>\$2500</b> |
| <b>Tier 2 Exhibit</b>   | <b>\$1500</b> |

*Group rates are available.  
Please contact John Buss at +1 202 309 7296 or john.buss@pira-international.com for more information.*

**For further information on the conference please contact:**

### Registration and Membership Inquiries:

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