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Welcome to the third issue of the Quadriga Newsletter.

This newsletter will be published a minimum of 3 times a year and it will inform you of progress within the 4 Quadriga Partners Projects. Additionally it will contain information about major developments, and research achievements in the field of the Organic & Large Area electronics (OLAE) in Europe, plus important updates about call for proposals from the Commission in Brussels and upcoming events.

The Quadriga Project is a joint initiative of the European Commission, the Directorate General of Information Technology & Media and 3 Coordination Action Projects and one Network of Excellence within the seventh framework programme: OPERA, Polynet, PolyMap and Prodi. The main and common objectives of all four collaborative projects are to foster the position of Europe as the gravitation point in the research of organic & large area electronics, and to strengthen the position of Europe as a main hub in this area. Ultimately the objective is to contribute to the creation of new start-ups and to the creation of a knowledge based European economy with strong comparative advantages.

We hope you find it informative and interesting and we welcome feedback and contributions.

The Quadriga Partners

(For more information and project links go to <http://www.quadriga-org.eu/>).





2. From the European Commission

Access to finance for SME's

A recurring barrier mentioned by the Organic Electronics industry representatives was the difficulty to access sufficient finance for start-ups and growth of companies. Today "horizontal" measures are in place to facilitate access to finance for SME's.

As part of the CIP programme, a website called Access to Finance (www.access2finance.eu) is available that will help SME's to apply for finance supported by the European Commission. Most SME's just need a loan, so part of the CIP budget is used to guarantee loans and lease finance to SMEs provided by a range of financial intermediaries involved in SME lending. The target is for such guarantees to cover around 300 000 loans/leases to SME's, from all sectors.

The second part of the programme relates to Venture Capital and provides capital to businesses which are either in the early stages of developing new products or services or in their expansion phase. EU money is invested in venture capital funds, which are financing vehicles specially established for this purpose. Venture capital funds are very selective about the businesses in which they will invest, typical areas of investment being information technology, including software, and the life sciences/biotechnology fields.

The EU provides venture capital through the High Growth and Innovative SME Facility (GIF) which is available under the CIP. GIF covers investment into venture capital funds which have an early stage focus, including seed funds and funds dedicated to technology transfer activity, plus funds with a focus on SMEs with high growth potential in their expansion stage. The GIF facility is managed for the European Commission by the European Investment Fund (EIF), which is an EU financial body with expertise in making venture capital investments. The GIF aims to provide funding to 40-50 VC funds, which in turn will invest in around 700/800 companies, mainly in information technology or life sciences/biotechnology.

In order to convince venture capitalists to invest in it, an SME needs to demonstrate its "investment readiness". Although the SME may often be technically capable and have a good idea, sometimes it cannot translate this into a good business plan that convinces the investors. Information about raising early stage finance can be found at the European Commission's Gate2Growth website. Further developing the entrepreneurial skills of companies, through specific training programmes, might be beneficial for the Organic Electronics sector. The European project OPERA is proposing these specific trainings and is linking Venture Capitalist with SME's and start-ups.

References:

For the CIP programme: http://ec.europa.eu/cip/index_en.htm

and its operational Entrepreneurship and Innovation Programme (EIP) http://ec.europa.eu/cip/eip_en.htm

The "Access to finance for SMEs through EU financial instruments" http://ec.europa.eu/enterprise/policies/finance/index_en.htm and <http://www.accesstofinance.eu>

The high growth and innovative SME facility (GIF) http://www.eif.org/venture/resources/european_commission/gif1_gif2/index.htm

For the European Investment Fund <http://www.eif.europa.eu/>

Business Angels: <http://www.eban.org/>

Entrepreneurial skills: <http://entrepreneurs.gate2finance.com/>

EU funding opportunities in Microsystems in 2009

A new call for R&D proposals on "Microsystems and smart miniaturised systems" will open on 31 July 2009 and close on 3 November 2009. With a dedicated budget of 80 M€, it will cover R&D activities on 3 topics: heterogeneous integration, autonomous energy efficient smart systems and application-specific Microsystems and smart miniaturised systems. An Information Day on "Microsystems and Smart Miniaturised Systems" to present in detail this R&D objective will be held on 23 June 2009 at the EC premises in Brussels (http://cordis.europa.eu/fp7/ict/micro-nanosystems/events-20090623_en.html).

R&D activities in Microsystems continue to be a priority objective in the Information and Communication Technologies (ICT) Work Programme for 2009-2010. A key target of the R&D objective "Microsystems and smart miniaturised systems" is the development of **application-specific Microsystems**. Technology developments should address the following application sectors: biomedical; telecommunications; environment, food and beverage; transport, safety and security; and smart fabrics and interactive textiles (SFIT). Of particular relevance for the organic and large area community are the application-specific topics and in particular SFIT, environment, and food & beverage.

From the European Commission continued)

The objective for the SFIT application sector is the development of multi-functional textiles and fabrics, in which sensing, actuating, communicating, processing and power sourcing are seamlessly integrated. Special emphasis is put on the integration of fibre-level components into textiles, on stretchable and wearable electronics embedded in textiles, and on fully integrated smart fabrics and interactive textiles. For environmental applications (including water treatment applications) and for food/beverage applications, reliability and cost reduction are the targeted challenges to be covered by integrated multi-sensing Microsystems.

With respect to the sub-topic **heterogeneous integration**, the focus is on heterogeneous technologies for more intelligence in Microsystems, on the integration of the multiple elements of the value chain of heterogeneous systems and on disruptive approaches for nanosensor-based Microsystems. **Autonomous energy efficient smart miniaturised systems** are also targeted in this call, with the ultimate objective of developing autonomous smart Microsystems for long-lasting operation. In this domain two major challenges are to be addressed: energy and communication.

The impact of the activities to be carried out within this objective is expected to crystallise in a strengthened global competitiveness of the European industry in Microsystems and smart miniaturised systems, and a wider use of smart systems in relevant application sectors, which will strengthen the competitiveness of the user industries and meet the societal needs of the citizens.

For further information please consult the ICT Work Programme 2009-2010 available at: ftp://ftp.cordis.europa.eu/pub/fp7/ict/docs/ict-wp-2009-10_en.pdf

Information Day on "Microsystems and Smart Miniaturised Systems" and Opportunities in "Green Cars" and "Factories of the Future"

23 June 2009 – Avenue de Beaulieu 25, room 0/S1, 1160 Brussels

The Information Day on "Microsystems and Smart Miniaturised Systems" and opportunities in the private-public partnerships "Green Cars" and "Factories of the Future", which will be held in Brussels on **23 June 2009**, is an excellent opportunity for already existing and future project participants:

- to familiarise themselves with the research challenges and objectives of ICT WP 2009-2010 in "Microsystems and Smart Miniaturised Systems", "Smart Factories: ICT for agile and environmentally friendly manufacturing" and "ICT for the Fully Electric Vehicle"

- to form project consortia for participating in calls for proposals (particularly in call 5- opening in July 31 and closing in November 3rd, 2009)

- to become familiar with the private-public partnerships "Green Cars" and "Factories of the Future"

You are invited to visit the web site for the event (agenda) at: http://cordis.europa.eu/fp7/ict/micro-nanosystems/events-20090623_en.html. The number of attendees will be limited to the capacity of the room and the priority in the registration will be given according to the reception of the registration form latest June 17.

Participants will have the possibility to present their ideas for potential proposals in these areas and discuss with Commission officials and potentially interested partners.

If you would like to **present your ideas for potential proposals**, we would like to invite you to send 2-3 slides describing the proposal idea, your technology capabilities and/or partners you would be looking for. Send your viewgraphs in advance to our functional mailbox: INFISO-Microsystems@ec.europa.eu and Ms Sara Gallardo (sara.gallardo@ext.ec.europa.eu)

Please note that the time slots allocated to your presentation will depend on the total number of presentations, but would not exceed a few minutes. For technical questions regarding the presentations, you may contact Ms. Griet Van Caenegem (griet.van-caenegem@ec.europa.eu).

Registration form (deadline June 17, 09)

(Email to: sara.gallardo@ext.ec.europa.eu)

Name :

Company:

I want to present a proposal idea : yes/no :

Topic:

Other comments:

3. Quadriga Partner Project News



Building a Strategic Research Agenda for the future of Organic & Large Area Electronics in Europe

The European Commission asked the industry to formulate a Strategic Research Agenda (SRA) for the future of Organic & Large Area Electronics (OLAE). The coordinated action [CA] project OPERA has invited OE-A (Organic Electronics Association), the European Technology Platforms Photonics21 and EPOSS to jointly formulate this SRA. A first draft of the OLAE SRA will be presented to and discussed with the Commission in Brussels, June 15 2009. The SRA is a major input for the definition of the "Flexible, organic and large area electronics" objective within the Information and Communication Technologies 2011 – 2013 work programme. The OLAE industry itself, together with organizations representing the other European OLAE stakeholders [such as university research groups, public authorities, etc.], must decide how it wishes to get organized and how it wishes to work towards a full-fledged research agenda supported by a majority of key European stakeholders in the field.

For your information. OLAE is an emerging technology, which deals with electronic components and systems based on new organic and inorganic functional materials. Through its very broad range of applications, OLAE will influence and affect many established industries and will revolutionize existing value chains. Coinciding with a long term trend in traditional silicon-based electronics towards lower price/performance ratio's [More Moore], OLAE will stimulate innovation processes within the CMOS industry itself. It will also extend the scope and range of electronics to industries where 'intelligence' [information technology] was absent so far as a key-driver in creating new value propositions, such as in packaging, consumer goods, textiles, etc. Additional value and jobs will be created in a variety of participating industries, with no legacy in electronics.

According to recent market forecasts the revenues for printed electronics [organics, in-organics and composites] will rise from .92 Bn in 2009 to \$ 57.16 in 2019. Manufacturers of electronic devices are expected to change to post silicon transistor technology, using thin film of both organic and inorganic compounds, and more and more printing, because of a greater output, larger areas and lower total cost of ownership [TCO] [IDTechEX'09].

Europe is generally considered to hold key positions in OLAE with respect to materials and processing technology. European vendors of materials, purpose built tooling and process integration are key drivers in this emerging field. But the world-wide landscape in OLAE is evolving rapidly, with world class competitors appearing in every application area.

European OLAE stakeholders decided to get organized, to address the value chain and to investigate the opportunities of manufacturing added value OLAE products and services in Europe. So a special industry interest group was initiated, supported by the OE-A, the European Technology Platforms Photonics21, EPOSS, the European Commission/DG Information Society & Media and the FP7 project OPERA.

The group decided to launch the interest group under the name "OLAE Industry Governance Board". Initial step of this board would be to formulate a long term oriented research agenda [SRA] for the sector, based on the input of the vision paper "The Future of OLAE in Europe" developed within the OPERA framework and the "Organic Electronics" white paper developed by the OE-A. The group got organised into task forces focusing on short, mid and long-term R&D targets in topic areas, such as Displays, Lighting, Electronics, Organic Photovoltaics and Integrated Smart Systems. The board is to submit and to discuss a first draft of the OLAE strategic research agenda on June 15, 2009 with representatives of the Commission in Brussels.

For more information about the OLAE Industry Governance Board, please contact :
Dr. Thomas Geelhaar, Thomas.geelhaar@merck.de
Mr. Ed van den Kieboom, ed.vandenkieboom@plastic-electronics.org





FIRST EVER OPERA VENTURE FORUM HELD ON MAY 19 2009

Focused investor-entrepreneur match-making can make the difference

In total 41 people registered for the OPERA Organic Electronics Venture Forum that took place on 19 May 2009 in Brussels, Belgium. The attendees represented start-ups and small and medium-sized companies, venture capital companies, consultancies, business incubators and research organisations from nine European countries.

The objective of the venture forum was to facilitate interactions between European investors and new OLAE start-ups and SMEs. While seeking for funding / investment opportunities was perhaps the single most important reason to register for most commercial players, the ability to follow industry trends and to network were also referred to as motivators to attend.

The event was opened by Mr. Ed van den Kieboom, President, Plastic Electronics Foundation, after which followed two keynote speeches. The first was from Dr. David Fyfe, Chief Executive of Cambridge Display Technology Ltd. He talked about opportunities for innovation in the OLAE value chains and presented the key milestones of the CDT case. The second was from Dr. Johannes Canisius, R&D Director for Merck Chemicals Ltd. He outlined the challenges of and prerequisites for creating new businesses from emerging technologies, using the evolution of liquid crystals as an example.

Both keynote speakers stressed the importance of maintaining determination and building mutually beneficial partnerships with key customers, technology providers and investors. It may take a considerable amount of time before a technology can prove its creditworthiness. In the meantime, the first and second round investors may lose their faith in the enterprise.

The lesson is this: While it is generally perceived that the OLAE market is gradually taking off, the 'valley of death' may be wide and money, at least seed stage funding, will be tight for some years to come. Many investors share this view, too. However, many of these investors who are not yet investing in OLAE are nevertheless actively following the development of the industry.

After the keynote speeches the presenting companies had the chance for their sales pitches. Each company had a 15-minutes to present to the room. There were twelve presentations in all, followed by question and answer sessions.

The presenting companies represented different application areas within OLAE, including displays, lighting, solar cells, sensors, batteries, gaming and so forth, as well as various positions in the value chain - from materials and processing technologies to systems integration. Many of the companies were still relatively small, and their short-term funding needs varied between 400 k€ and 20 M€. Investments in production capacity, market development and expansion in general require a lot of money in particular, usually much more than the development of technologies and demonstrators.



OPERA Venture Forum website
<http://opera-project.eu/index.php?id=13&lang=EN>



International Summit on OPV Stability, ISOS-2 '09

Contact person: Albert van Breemen, Holst Centre/TNO, albert.vanbreemen@tno.nl

The first International Summit on OPV Stability (ISOS-1) was held in 2008 in Denver, USA. It nucleated an international effort to look at lifetime, round robin testing and development of a concurrence roadmap for OPV. The second International Summit on OPV Stability on April 21-22, 2009 in Amsterdam, The Netherlands was organized in a collaborative effort between the European Coordination and Support Action Projects OPERA and OrgaPVnet, together with Plextronics, Konarka, National Renewable Energy Laboratory (NREL) and the Department of Energy (DOE). This event was an interactive and discussion-filled meeting, attended by 65 persons from 11 countries and 34 organizations. It brought together a select group of global leaders in the area of OPV development and commercialization to initiate the creation of global standards for measuring OPV stability, performance and lifetime. Talks were contributed from several companies and institutes addressing the current state-of-the-art in different sectors of the community:

- “Correlation and Acceleration - How does laboratory accelerated testing correlate to real-life ageing?” by Dr. Andreas Riedl, Atlas MTS.
- Stability and degradation of R2R processed flexible polymer solar cells by Dr. Frederik Krebs, Risø National Laboratory for Sustainable Energy.
- Recent OPV lifetime efforts and results and status of current DoE roadmap by Dr. David Ginley, National Renewable Energy Laboratory.
- Standardization of OPV lifetime and technology update by Dr. Darin Laird, Plextronics.
- State of the art in ALT and outdoor testing of OPV by Dr. Jens Hauch, Konarka.

While it was of course premature to establish a detailed, comprehensive set of measurement practices, there are number of concrete suggestions that resulted from the breakout sessions:

- technology specific qualification testing

simple	advanced
shelf-life	damp-heat
high temperature storage	light-soak
illumination test	outdoor

- Round robin lab-to-lab efficiency correlation

A round robin will be initiated in the 3rd quarter of 2009 to determine lab-to-lab efficiency correlations. 15 Participants have already volunteered. At first, a commercial package based on monocrystalline Si will be used. ECN and NREL provide a measurement protocol and report form. All data will be collected by NREL and disseminated to the community. In a second round, a similar protocol will be used to determine lab-to-lab efficiency correlations for OPV-based devices.

All presentations, together with the results of the break-out sessions will be published on the ISOS-2 '09 wikispaces website in the 3rd quarter of 2009.

Preparations for ISOS-3 '10 have already started. It will be organized by Risø National Laboratory for Sustainable Energy, together with all the members of the ISOS-2 organizing committee. Tentative date and venue: week 16 (19-25 april 2010) in Roskilde, Denmark.



Above: ISOS-2 organizers: from left to right Jens Hauch (Konarka), Albert van Breemen (Holst Centre, representative of OP-ERA), Darin Laird (Plextronics), David Ginley (NREL), Jan Kroon (ECN, representative of OrgaPVnet)



OPERA PROJECT WELCOMES NEW MEMBERS PATRICK VUILLERMOZ OF PLASTIPOLIS, PROFESSOR STERGIOS LOGOTHETIDIS OF LTFN AND BERNHARD SCHWEIZER OF INNOVATIONLAB (iL)



Above: Mr. Patrick Vuillermoz, Plastipolis, Professor Stergios Logothetidis of LTFN and Dr. Bernhard Schweizer of InnovationLab.

Plastipolis is a SMEs cluster network including most of the leading plastic industry clusters in Europe and nanotechnology for Plastic. Their relation with other European clusters and SMEs will support the communication and dissemination of the project. Plastipolis is France’s only industry and research cluster covering the plastic processing industry. It represents over 35000 employees in more than 1000 firms with a combined turnover of 8 billion € of turnover. The cluster currently has 195 members, including 17 research organisations, 150 industrial companies, both Large and SMEs, 10 Regional/local authorities and 12 Education centres.

- Plastipolis has experience in, and links to, a number of other European research projects including: MULTIHYBRID Project (led by Proplast, Italy, FP6), CORNET BIOPOLYMERS (led by Ecoplus, Austria, FP6), COTECH Project (led by Fotec, Austria, FP7), Interplast (French/Italian inter-regulatory project), CLUSTERPLAST (FP7 “region of knowledge” program – inter-cluster project aiming to build a joint action plan for the polymer processing industry in Europe).

- Our initiatives in the OPERA field:

- Plastipolis has established a set of 6 strategic technology programs. One of them is devoted to smart plastics meaning the implementation in plastic parts either of silicon based chips or of organic electronic polymer. The key player of this strategic program is CEA-Liten in Grenoble, France, but it involves a set of innovative companies (SMEs or big firms such as Schneider Electric).

- Our interest for OPERA:

- Organic electronics for large array application is one of the major of the Plastipolis member companies (material converters as well as OEMs). A specific seminar on this matter, organised by Plastipolis, is going to take place on June 16th in Lyon, France.

-To join OPERA group represents for Plastipolis the opportunity to get involved with the leading R&D players in this field in Europe.

For more information go to <http://www.plastipolis.fr/index1.php?lg=gb>

LTFN (<http://lfn.physics.auth.gr>) is established at the Physics Department of Aristotle University of Thessaloniki (AUTH) in Thessaloniki, Greece. LTFN/AUTH is internationally acknowledged for its' 18 year-old experience in Thin Films and Nanomaterials, Nanometrology and Optical Technology. LTFN/AUTH owns an excellent infrastructure for performing R&D activities related to Organic Electronics and is active on: The development of organic semiconductors and electrodes by vacuum & wet methods, barrier layers for the encapsulation of flexible electronic devices, Investigation of optical, electrical, morphological properties & charge-transport mechanisms, Modelling for simulation of structure of materials & devices, Applications in flexible organic electronic devices, OPVs, OLEDs for lighting, circuits, Training, Conferences (<http://isfoe.physics.auth.gr/>, <http://nnconf.physics.auth.gr/>) Summer Schools, Post-Graduate program including subjects related to organic electronics (<http://nn.physics.auth.gr>).

LTFN/AUTH is also coordinating the Thematic Research Network "Nanotechnologies & Nanobiotechnologies" (NANONET <http://www.nanonet.gr>) with more than 140 members from Greece and abroad. NANONET includes various thematic areas (clusters), and one of the main areas is related to Organic Electronics. LTFN also collaborates and networks with more than 100 worldwide research organizations and during the last years. LTFN/AUTH has participated (e.g. POLYNET) and has successfully coordinated several Research Projects related to Organic Electronics (e.g. FP5: TransMach, FP6: FLEXONICS, FP7: OLATronics).

LTFN/AUTH is motivated to support OPERA's main goal and thus strengthen Europe's position in Plastic Electronics by interaction and exchange of European clusters in Organic & Large Area Electronics through participation of the related activities performed in Thessaloniki, Greece. In this area, several initiatives such as the creation of Thessaloniki Innovation Zone, promote exploitation of new knowledge for commercial purposes, aiming at the economic development of the region.

For more information go to <http://lfn.physics.auth.gr>

InnovationLab (iL) is an application-oriented research and transfer platform of business and science in the German Rhine-Neckar Metropolitan region. It was jointly founded by the six companies BASF SE, Freudenberg & Co. KG, Heidelberger Druckmaschinen AG, Merck KGaA, Roche Diagnostics GmbH, SAP AG, and the universities of Heidelberg and Mannheim.

iL is responsible for the management of the cluster Forum Organic Electronics which was awarded with a government grant of € 40 million in the Cluster of Excellence competition of the German Government in 2008. Within the field of Organic Electronics, the company focuses on following research areas:

- Organic Photovoltaics
- Organic Logic and Memory
- Organic Sensors
- Organic Light-Emitting Diodes

All projects are based on printing technology enabling low cost mass production. Additionally, these areas are supported by competence centers in simulation, synthesis, analytics and printing technology.

iL has joined the OPERA project because of the opportunity to contribute to a consolidated European strategy in the development of Organic Electronics. With its specific competencies, iL wants to be part of the joint effort to strengthen Europe's worldwide leadership in this future technology.

For more information go to <http://www.innovationlab.biz/index.html.en>

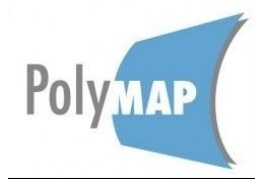
The Opera partner's welcomes and looks forward to working with these new members to achieve the overall objectives of the project.



Workshop-Announcement: "Pre-Standards for oFETs and organic ICs"

A workshop on defining pre-standards for oFETs and organic ICs applications will be held within the frame of the OE-A (Organic Electronics Association) working group meeting in cooperation the European project OPERA in Leverkusen, Germany on **Nov. 9th-10th, 2009**. The workshop aims at establishing pre-standards for measurement protocols, quality control, and lifetime-testing for oFETs and oICs. The workshop addresses companies as well as research organizations being active in the field of organic & large area electronics (OLAE).

For further details and registration please be referred to <http://www.oe-a.org> or www.opera-project.eu

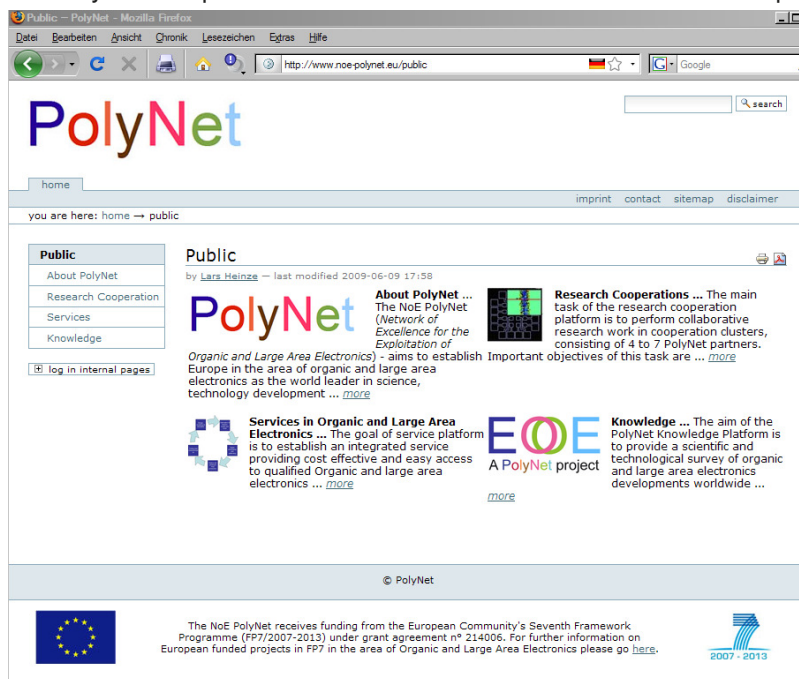


There is no news for this issue, please check the website for updates on this project. Go to <http://www.polymap.eu/>

News from NoE PolyNet

New URL

For easy access please use the new URL and restructured home page www.noe-polynet.eu.



News from the PolyNet Platforms

Research Cooperation Platform

Demonstrators at the LOPE-C: Find several demonstrators our of the PolyNet research cooperation displayed at the Quadriga booth H02 at LOPE-C 2009 in Frankfurt.

Currently six PolyNet research collaborations are running. For a comprehensive overview on the results please go to: <http://www.noe-polynet.eu/public/cooperation>

Service Platform

The revised PolyNet Service Platform contact is online. Please use the contact form included to send your requests to the PolyNet team: <http://www.noe-polynet.eu/public/services/contact-form>

Knowledge Platform

EOOE reports with selected topics and Conference reports are available: <http://www.noe-polynet.eu/public/knowledge/eooe-results/>

PolyNet Events

- ICOE 2009 (15. - 17.06.2009 – Liverpool, United Kingdom): Special Session on Nano Imprinting => http://icoe09.com/Prog_Monday.htm
- LOPE-C 2009 (<http://www.lope-c.com/> - 23. - 25.06.2009 – Frankfurt/M., Germany): PolyNet will display at the Quadriga booth n° H02 – Quadriga come together 24.06.2009 12:00
- ISFOE 2009 (<http://isfoe.physics.auth.gr/> - 8. – 10.07.2009 - Halkidiki, Greece): Special Session on Multifunctional Materials on Wednesday, 08.07.2009 => <http://isfoe.physics.auth.gr/program.html>

About NoE PolyNet

The NoE PolyNet (Network of Excellence for the Exploitation of Organic and Large Area Electronics / OLAE) aims to establish Europe in the OLAE area as the world leader in science, technology development and subsequent commercial exploitation of printing and large area technologies for heterointegration of flexible electronics.

Contact

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heinze@vdivde-it.de, <http://www.vdivde-it.de/polynet>

Research Cooperation Platform: Isak ENGQUIST (isaen@itn.liu.se / Linköping University, Sweden))

Service Platform: Markku KÄNSÄKOSKI: (Markku.Kansakoski@vtt.fi / VTT, Finland))

Knowledge Platform: Isabelle CHARTIER (isabelle.chartier@cea.fr / CEA-LITEN, France))



PRODI

PRODI elaborates equipment roadmap

Organic and large area electronics will have a large impact on the way flexible circuits are fabricated in the future. New and fast printing methods, uniform coating and patterning processes for large substrates, together with novel functional materials requires new ways of efficient manufacturing. The goal of the PRODI project is to identify and predict the demands on equipment for processing, automation and measurement instrumentation and to support European equipment suppliers to get ready for future OLAE applications.

Of course, this task is not easy to accomplish, since currently possible applications are visible but still away from being clearly specified from a manufacturing view. Roadmap has to be balanced between delivering too generic or too untrustworthy statements.

On May, 13th, the PRODI project consortium organised its 3rd workgroup meeting together with partners of its Industrial Advisory Board. Based on the results of a survey among different stakeholders an initial set of requirements has been already obtained. To put the process on a firm basis a further approach has now been started using the Quality Function Deployment (QFD) tool as systematic approach to structure information and to match application requirements with engineering parameters and finally with specifications of manufacturing equipment. The QFD method is expected to deliver more robustness in data evaluation and more reliable data. For initial analysis three applications - organic photovoltaic, display for signage and organic transistor backplane – have been chosen.

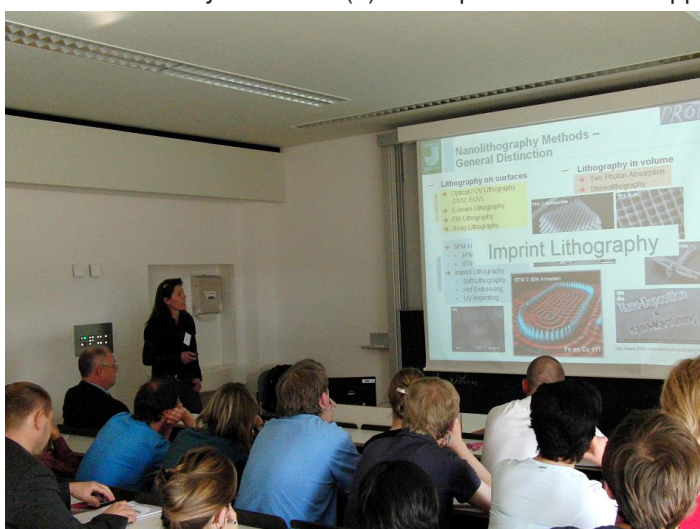
Of course, anyone interested in this task is welcome to contribute to this approach. The next meeting, where the method and its first results are presented, takes place on the occasion of LOPE-C conference in Frankfurt on 25th of June 2009. For additional information see also our website www.project-prodi.eu



PRODI Intensive Course and Workshop 2009 on “Advanced technologies for functional printing”

On April 21st and 22nd 2009, Chemnitz University of Technology (TUC) organized an intensive course and workshop titled “Advanced technologies for functional printing” under the general chair of Professor Dr. Reinhard R. Baumann. The event was held within the scope of the EU-FP7-CSA PRODI and co-hosted by the Fraunhofer-Institution of Electronic Nanosystems (ENAS) and 3D-Micromac AG Chemnitz as industrial partner. The aim of the event was to address decision makers of industry, small and medium sized businesses and employees of basic and applied research organizations about the fundamental requirements of printing for different areas of printed electronics.

Renowned scientists from Europe could be attracted as speakers both from universities (Chemnitz University of Technology, University of Jena) and applied research institutes (Joanneum Research Society, TNO/Holst Centre, CEA-Liten, VTT, Acreo AB) and well-known companies (PolyIC, Merck Chemicals, Steinemann Technologies). Altogether, 45 participants registered for the workshop, mostly from Germany (24 local, 9 non-local) but also from Belgium (2), Finland (2), Spain (2), Switzerland (2), Austria, France, Great Britain, Sweden and the Netherlands. With a number of 30, the largest group of participants came from universities. However, there was also an adequate number of industry members (8) and representatives of applied research institutions (7).



The curriculum consisted of introductory plenary lectures, specialized keynote talks, lab tours through the Center of Microtechnologies and the Institute for Print and Media Technology and an all-day poster session. The topics of the presentations reached from introduction to printing technologies and functional printing to materials, technologies and applications. In a final panel discussion, it was summed up that functional printing is still part of a big process making though good progress was achieved within the last years. However, commercial examples are needed more than ever to convince the industries of the benefits possible by the use of printed electronic application and to bring them into industrial production.

4. GENERAL NEWS

LOPE-C

Large-area,
Organic & Printed Electronics
Convention

June 23–25, 2009
Congress Center, Messe Frankfurt, Germany

<http://www.lope-c.com/>

LOPE-C 2009 is the premier conference and exhibition on organic and printed electronics, hosted by the Organic

Electronics Association (OE-A) and Messe Frankfurt Ausstellungen GmbH (MFA).

- With more than 100 presentations from 21 countries and more than 50 exhibitors LOPE-C is the largest and most comprehensive event in the field.
- Don't miss the annual summit of the industry, on June 23-25, 2009, Congress Center, Messe Frankfurt / Germany.
- More than 500 attendees along the value chain from all over the world are expected at the conference and exhibition.

Keynotes:

Presentations by Airbus, Harris&Harris, Merck, OE-A, Plastic Logic, Plextronics, University Linz, Total, and by Thierry Van der Pyl, Director Components, European Commission

Business Conference:

This conference addresses all aspects of the commercialization of organic and printed electronics from investors to manufacturers and end-users.

Presentations by: Bizerba, OSRAM, manroland, Novald, PolyIC, SAP, Stora Enzo, to name a few

Main Conference:

This conference provides the most comprehensive overview on organic and printed electronics. In four parallel tracks including one scientific track world class speakers from Europe, North America, Asia and Australia update you on all innovations from materials to state-of-the-art applications.

Presentations by: AIST, Applied Materials, BASF, Bayer, CSIRO, Dimatix, Giesecke & Devrient, HC Starck, HP, Hitachi, ITRI, Konarka, Lufthansa, UC Berkeley, Siemens, Sunchon University, U Konkuk and more than 50 additional presentations.

Exhibition:

At the exhibition you will have the opportunity to see what the field has to offer now and to learn from representatives from research and industry what the future holds in store.

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IS-FOE09

8-10 July 2009, Porto Carras Hotel, Halkidiki, Greece

Website: <http://isfoe.physics.auth.gr>

IS-FOE (International Symposium on Flexible Organic Electronics) is one of the most important Scientific & Research Event in Organic Electronics in Europe and it is organized by LTFN and the Plastic Electronics Foundation, whereas it is supported by the Projects Flexonics, OLAtronics, PolyNet and OPERA.



The purpose of the Symposium is to bring together scientists and engineers actively engaged in the research, development, and manufacturing for Flexible Organic Electronics including organic/inorganic materials, flexible substrates, manufacturing processes, circuit designs, flexible devices, system integrations and product applications, and to discuss current progresses in this emerging field.

This year's IS-FOE09 (2nd International Symposium on Flexible Organic Electronics) will take place in Porto Carras Hotel (www.portocarras.com), a beautiful location in Sithonia peninsula of Halkidiki, very close to Neos Marmaras village and almost 100 km from the Macedonia Airport.

The topics of the IS-FOE symposium 2009 will include, but are not limited to:

- Organic electronic materials (small molecule and polymers)
- Organic Multifunctional materials
- Organic/inorganic and hybrid materials and systems
- Flexible substrates & encapsulation methods & materials
- Molecular electronics and photonics
- Self organized molecules and systems
- Theory & modelling (materials, components and devices)
- Manufacturing (printing, vacuum, chemical) & quality control processes
- Flexible displays & lighting
- Flexible solar cells & batteries
- Flexible circuits & sensors
- Flexible RFIDs & textiles

The IS-FOE09 will consist of several events, including, Plenary & Keynote Presentations, Oral Presentations and Poster Sessions. The Main Scientific Symposium will also include peer-reviewed sessions, round tables for discussion and Exhibitions. The IS-FOE09 will include a Special Session: "Strategy and R&D Projects in Europe, USA and Asia in Flexible Organic Electronics!" on the 8th of July, where foreign representatives and coordinators of R&D Projects (FP6 και FP7) will present their Projects and future perspectives.

This year's IS-FOE09 will continue and overcome the last year's success in IS-FOE08. More than 200 participants are expected to attend the IS-FOE09 (from Europe, USA and Asia), with 30 Invited Speakers and more than 100 Presentations (Invited, Oral & Poster) from several countries around the world!



**Organic Semiconductor Conference 2009 - London Heathrow Marriott Hotel, UK
28–30 September 2009**

For more information download pdf: peportal.org/site/uploads/OSC-09 - General Flyer.pdf

The 7th annual Organic Semiconductor Conference (OSC-09) is now cordially inviting submission of papers. This year the focus has been widened to include carbon based electronics, in particular devices based on organic semiconductors, carbon nanotubes, fullerenes and graphene.

Abstracts are invited on subjects relating to, but not restricted to:

OLED displays - OLED lighting - organic photovoltaics - organic transistors - organic memory - organic lasers - organic sensors -

device architecture - circuit design - fabrication - materials - encapsulation - test - standards - simulation - modelling

Selected papers will be accepted for oral or poster presentation at the conference. (Please indicate on submission)

The deadline for the submission of a one page abstract and a 100 word summary is Sunday 28 June 2009

For full details please visit: <http://www.cintelliq.com/conference.htm>



5. How to join the Quadriga Associated Network Member

Offer to become a member of the Quadriga Associated Network on Organic and Large Area Electronics

The Quadriga Project is a joint initiative of the European Commission, the Directorate General of Information Technology & Media and 4 Collaboration Action Projects within the seventh Framework Program: OPERA, PolyNet, PolyMap & Prodi [See also www.quadriga-org.eu]. The main objectives of all four collaborative projects is to foster the position of Europe as a gravitation point in the research of organic & large area electronics, to strengthen the position of Europe as a main hub in this area and ultimately to contribute to the creation of new start-ups and to the creation of knowledge based employment. The first OLAE newsletter which was published by the EU is now available on the website. Contributions for the second are welcome and we will endeavor to include all relevant news submitted.

Here are just a few of the benefits offered:

- You will receive newsletters on the topic area of large area and organic electronics regularly, but at least three times a year;
- You will receive first hand information and participation details about Networking Events organized by the EU;
- You will receive advanced information about Quadriga Workshops on the topic area;
- You will receive preferred registration information about all Quadriga events

Please go to the following at www.quadriga-org.eu/index.php?id=12&lang=EN to register.

6. Upcoming Events

6th International Conference on Organic Electronics

15 - 17 June 2009

City Centre Campus, University of Liverpool, Liverpool

The deadline for papers is the last day of February 09. They should be sent toicoe09@liverpool.ac.uk. The conference dinner and accommodation is at the Adelphi Hotel.

Electronique polymère sur substrats flexibles et conformables : Procédés, fonctions et perspectives industrielles

16 June 2009

Lyon, Cité internationale, France

<http://www.omnt.fr/>

OE-A 5th Annual General Assembly including Elections to the OE-A Board

22 June 2009

VDMA, Frankfurt, Germany

(Day before LOPE-C)

www.oe-a.org

UPCOMING EVENTS (continued)

Information Day on "Microsystems and Smart Miniaturised Systems" and Opportunities in "Green Cars" and "Factories of the Future"

June 23 2009

Avenue de Beaulieu 25, Room 0/S1, 1160 Brussels

http://cordis.europa.eu/fp7/ict/micro-nanosystems/events-20090623_en.html

LOPE-C

June 23-25, 2009

Frankfurt, Germany

Large-area Organic and Printed Electronics Convention

The official annual conference & exhibition of the Organic Electronics Association (OE-A)

<http://www.lope-c.com>

Short Course on Polymer Nanocomposites

June 25-26, 2009

Alessandria, Italy

Organized by ECNP in Alessandria, Italy, in the framework of their training activities. The Short Course is linked to the EUROFILLERS Conference and is one of the two main events organized by ECNP each year.

Please download brochure pdf for more information:

uploads/Alessandria Brochure_draft-2.pdf

ISFOE 09

July 8 -10 2009

Porto Carras Hotel, Halkidiki, Greece

2nd International Symposium on Flexible Organic Electronics

<http://nn.physics.auth.gr/isfoe>

Organic Semiconductor Conference (OSC-09)

28-30 September 2009

London Heathrow Marriott Hotel, UK

www.cintelliq.com/osc09

OE-A 18th WG Meeting

15-16 September 2009

Hosted by VTT Technical Research Centre, Espoo, Finland

www.oe-a.org

Semicon Europe 2009

6 - 8 October 2009

Dresden, Germany

www.semi.org

5th Global Plastic Electronics Conference and Showcase

27, 28 & 29 October 2009

Maritim Hotel & Conference Centre, Dresden, Germany

More information to follow

<http://www.plastic-electronics.org/global/>

OE-A 19th WG Meeting

9-10 November 2009

Leverkusen, Germany

www.oe-a.org

Pre-Standards for oFETs and organic ICs Workshop

9 - 10 November 2009 (part of above event)

A workshop on defining pre-standards for oFETs and organic ICs applications will be held within the frame of the oe-a working group meeting in cooperation the European project OPERA in Leverkusen, Germany on Nov. 9th-10th, 2009.

The workshop aims at establishing pre-standards for measurement protocols, quality control, and lifetime-testing for oFETs and oICs. The workshop addresses companies as well as research organizations being active in the field of organic & large area electronics (OLAE).

For further details and registration please be referred to <http://www.oe-a.org> or <http://www.opera-project.eu>



The next issue of the Quadriga Newsletter will be released in September/October 2009. If you have any news or wish to have an event included in the "Upcoming Events" section, please email copy to victoria.plompen@plastic-electronics.org before September 14th 2009. We would like to thank all contributors for their work.

For more information on Quadriga please go to <http://www.quadriga-org.eu/>

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