



Quadruga Newsletter Issue 5 - February 2010

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1. Introduction

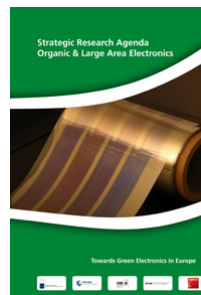
Welcome to the fifth issue of the Quadruga Newsletter.

This issue details the latest news from the Commission, the Quadruga Partners project news, news about the latest developments in the large area electronics (OLAE) in Europe, upcoming events and also related appointments in the new positions available section.

A important news item for this 5th edition was the presentation of the final version of the Organic & Large Area Electronics [OLAE], Strategic Research Agenda [SRA], together with the 2nd edition of the Photonics21 Strategic Research Agenda, during the 4th Annual General Assembly



Meeting of the Photonics21 European Technology Platform, on January 15, 2010 at the Radisson Blu Hotel in Brussels [See picture above]



Both strategic Research Agenda's are down loadable from the websites from the Quadriga Partners, such as at www.opera-project.eu and from the website of Photonics21 at www.photonics21.org

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

26 new R&D projects in OLAE and in Organic Photonics are launched!

Following the ICT Call 4 of last April, 26 new projects in Organic and Large Area Electronics and Photonics have been selected and signed a contract with the EC, for a total amount of more than 90 m€ EC funding. More precisely:

- Under the ICT Call 4 Objective on "Flexible, Organic and Large Area Electronics", 13 new projects were selected, for 59.5 m€ EC funding, see Figure 1. The new projects address R&D on flexible, organic and large area electronic devices and building blocks (see area marked "Electronics" of Figure 1); OLAE-related manufacturing models like sheet to sheet, roll to roll, and organic/inorganic process combination (see area marked "Manufacturing" of Figure 1); and flexible or foil-based systems (see area marked "Foil integration" of Figure 1). There are in total 3 Integrated Projects – IPs COSMIC, Place-IT and POLARIC, one network of Excellence – NoE FlexNet and 9 STREPs (Oricla, MOMA, BioegoFET, Priam, e-Lift, Lotus, CELLO, Interflex and Chip2Foil).

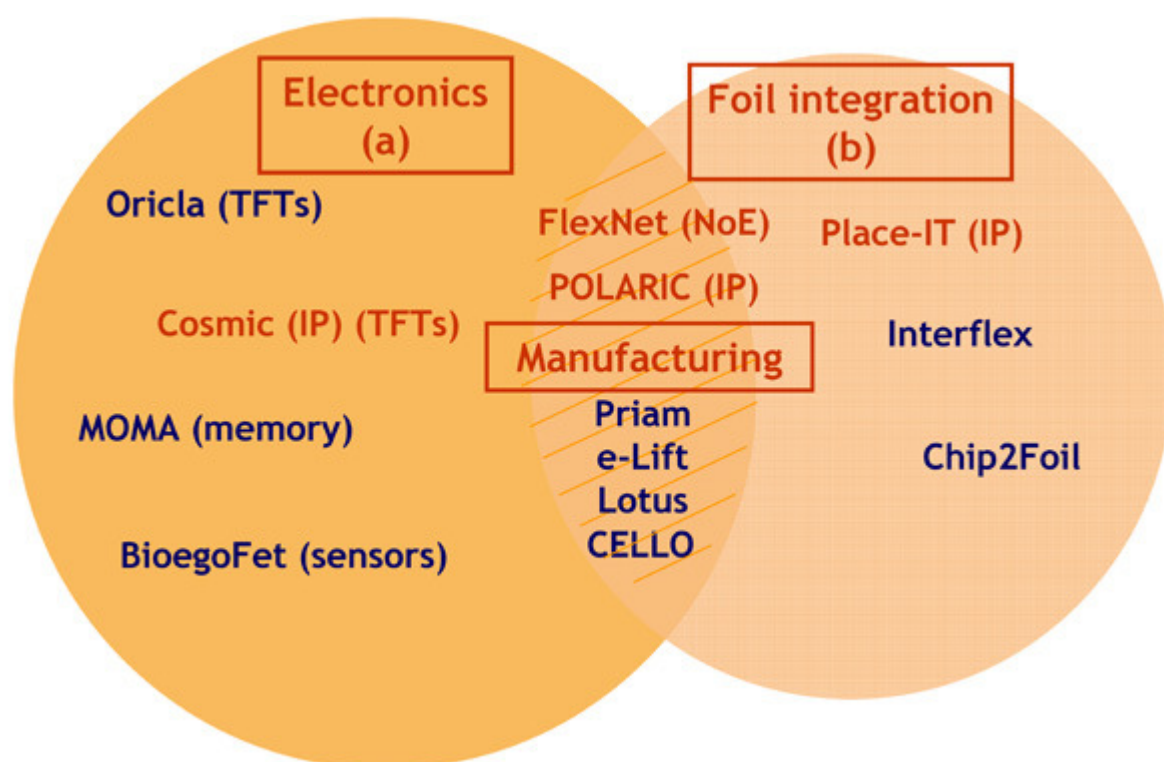


Figure 1: 13 new EU projects launched in the area of Flexible, Organic and Large Area Electronics

- Under the ICT Call 4 Objective on "Organic Photonics and other Disruptive Photonics Technologies", another set of 13 new projects were selected, one Network of Excellence (NoE) and 12 STREPs, for 33.5 m€ EC funding, see Figure 2. The NoE Nanophotonics4energy focuses on the creation of a virtual centre of excellence on green nanophotonics. Three of the 12 STREP projects address photovoltaics (Hiflex, PRIMA, and LIMA), four are dealing with optical communication networks (SOFI, Copernicus, Platon and Qurep), another four are proposing advances in the area of biophotonics (Photo-FET, P3sens, Spedoc and Plaisir) and finally one is about new light emitting devices (LAMP).

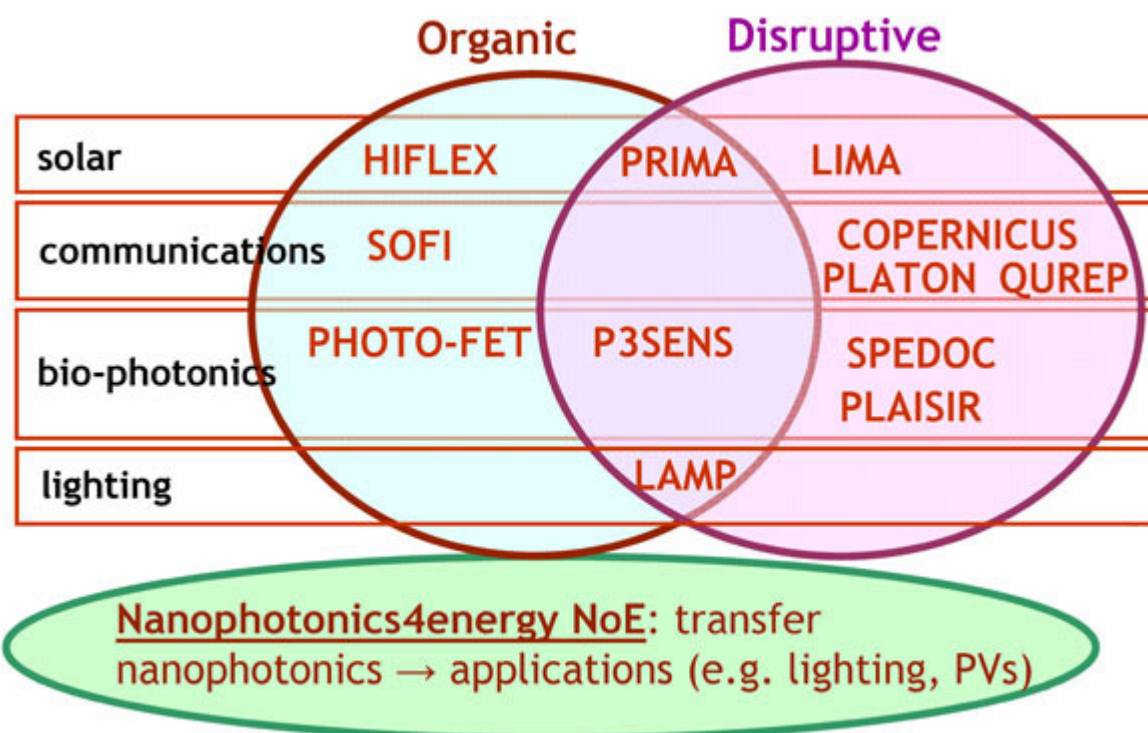


Figure 2: 13 new EU projects launched in the area of Organic Photonics and other Disruptive Photonics Technologies

Most of these projects are now underway with a start date of January 1st, 2010. Full details of the projects will be made available on the EU's OLAE and Photonics web pages at <http://cordis.europa.eu/olae> and at <http://cordis.europa.eu/photonics>.

OLAE at the Photonics21 Annual Meeting 2010

More than 300 people attended the Photonics21 Annual Meeting 2010 on 15 January 2010 at which both the new Photonics21 and Organic Large Area Electronics (OLAE) Strategic Research Agendas were handed over to the European Commission. The Strategic Research Agenda (SRA) of the OLAE "Towards green Electronics in Europe" was presented by Thomas Geelhaar (CTO Merck). All involved appreciated the decision by Photonics21 to welcome the OLAE community and jointly tap the full potential of these exciting and complementary fields.

The Photonics21 Board of Stakeholders was enlarged by 19 new members, including also representatives of the OLAE community: Jaap Lombaers (TNO Holst Centre), Andreas Rückemann (Heliatek), Karl Leo (Fraunhofer-Institute for Photonic Microsystems), Wolfgang Mildner (PolyIC), Pierre P. Barthélemy (Solvay), Thomas Geelhaar (Merck) and Harri Kopola (VTT, Technical Research Centre of Finland).

For further information on this event, please see <http://www.photonics21.com/>.

We welcome these developments and we look forward to a most fruitful collaboration of OLAE and Photonics within the Photonics21 technology platform.

3. Quadriga Partner Project News



Encapsulation Standardization Workshop Announcement

A joint workshop between the Organic Electronics Association (OE-A) and the OPERA EU project on the topic of "Encapsulation standardization" will be held during the OE-A working group meeting from 08.30 to 13.00 on February

24th 2010 in Eindhoven, the Netherlands.

The workshop will review the current status of encapsulation performance and evaluations methodologies as seen by several key players, and identify ways forward to meet the remaining challenges in the field.

Please email to ingrid.willam@vdma.org if you want to join the workshop. More information about the oe-a working group meeting is found at: www.oe-a.org.

Why bother about standardization?

Almost all stakeholders involved in the development and deployment of new technologies will agree on the fact that standardization is an extremely important issue in order to make an emerging technology successful, but only very few companies, research institutes and universities are willing to provide the necessary resources for the actual standardization work.

Research and standardization communities are supported by independent and, in some cases, isolated work forces, which do not properly facilitate the technology transfer from the R&D world to the world of production and deployment. Two very clear examples on what happens, if standardization is not done at a very early stage, are the different widths of railroad tracks in various countries, preventing use of the same locomotives and rolling stock cross-border, and the different types of plugs used all over the world, which drive every traveller mad. To prevent delays in the development of standards, it is necessary that standardization be addressed within research projects, as the European Commission has been doing for quite a while in their Framework Programmes.

Unfortunately SMEs and the research industry are not very active in leading new standardization. Many of them do not have a clear vision of the value of standardization and believe that standards are costly and useless, that they prevent SMEs from developing products quickly and thus risk loss of competitiveness. They perceive that Standard Development Organizations (SDOs) are for big companies, whose models of operation are different, and they thus fear sharing precious information in SDOs.

But on the contrary, standardization has very positive effects on the quality of products, on the trust of customers in new technologies and, in some cases, it is even the key to enabling a technology, as has been the case with GSM, GPRS and UMTS: Mobile telephony and other mobile services simply would be impossible without the underlying standards guaranteeing the interoperability across all involved networks on all network layers. Mobile telephony and mobile services are also a good example of standards that do not at all prevent the diversity of products, so that manufacturers and service providers are still able to differentiate themselves very strongly on the market. The standards in this area only cover those issues which are absolutely essential to allow smooth and continuous operation. They build a platform, on top of which various services can be easily provided.

To ensure interoperability for any kind of technology it is vital to describe all essential mechanisms in exact detail in standards. Certainly this means that a lot of resources are needed, and much travel may be required in order to cover this huge amount of work. But it is worthwhile, since standardization has big advantages for everybody.

Almost without exception, global markets are only to be reached by standardized products, especially if their customer value lies in interoperability. Standardization contributes to customer confidence and makes the end-user independent from proprietary solutions. Many big players in the ICT area have it made one of their most important business rules to never buy products from only one single supplier, but to have at least two or three, from whom they buy the same products. The reasons behind this approach are independence in buying, negotiable prices, no proprietary lock-in, increased confidence that additional features will not interfere harmfully with existing services and features, and that upgrades will be much less risky than is often the case with proprietary solutions.

Manufacturers also benefit from standardization, as their products are commercialized faster. If standardization is started early enough during the R&D process, it can vastly speed up the time-to-market period. Early standardization helps to exploit research results through multiple feed-back, improving technologies and products from the very beginning. Standardization is a product of many contributions representing diverse interests. It thus serves as an excellent means of identifying potential interoperability problems from the very beginning. Therefore individual manufacturers do not need to go through the complete evolutionary process of a product or service on their own, but can use standardization feed-back from competitors for improving their own developments. Thus standardization lowers the burden of full evolution and maintenance especially for SMEs.

Good standardization also advocates the writing of test specifications to supplement all the core standards - whilst those core standards are being drafted. Simply the discipline of writing conformance and interoperability

specifications allows some primary error detection even before the first tests have been carried out. Conformance and interoperability tests then help to manufacturers to check whether their implementations are correct and consistent with what is written in the standard. Moreover the standard itself also is validated for correctness thanks to the neutrality of black-box testing software.

However, even late standardization will enable a product to be placed more effectively in the market than it would be without any standardization.

The later standardization starts within the R&D process the more each company will have already invested into its own development. Each company will then be less willing to give up on the investments already made, for the sake of agreeing to a new standard. In such a situation, much time can be lost in argument and debate, delaying the ultimate approval of the standards of course.

Thus it should be one of the highest priorities in any R&D process to anticipate whether interoperability will be an issue for the service or product to be built, and to determine the optimum moment to begin working on standards. The measure for a good and successful standard is in fact not how much time was needed for drafting it, or under which circumstances it was written. The only important parameter to identify a standard of high quality in terms of usefulness is how frequently it can be found in implementations in products available on the market.

Jan. 2010 by Gaby Lenhart, ETSI (gaby.lenhart@etsi.org)

[Summary on OE-A – OPERA – PRODI workshop on “Quality control, measurement, manufacturing and standards preparation for organic thin film transistors \(OTFTs\)”](#)

A joint workshop was held in cooperation with Organic Electronics Association (OE-A) and two Quadriga EU-FP7 projects OPERA and PRODI on the topic of “Quality control, measurement, manufacturing and standards preparation for organic thin-film transistors (OTFTs) & organic integrated circuits (OICs)” on Nov. 10th 2009 in Leverkusen, Germany. About 30 representatives from industry, research organizations, technical universities, and standards development organizations participated in the workshop. After a plenary session with three keynote talks on “Standards preparation efforts within OPERA by C. Winnewisser/A.von Mühlengen (CSEM), “Evaluation of R2R manufacturing strategies of oFETs within PROD” by G. Pieterse (Holst Centre/TNO) and “Why bother about Standards?” by G. Lenhart (ETSI) two parallel discussion groups on the topics of “Standards preparation for OTFTs & OICs” (OPERA) and “R2R manufacturing strategies of OTFTs” (PRODI) were formed.

In the OPERA-session on “Standards Preparation for OTFTs & OICs” a roadmapping process for OTFT-standards was started based on the published IEEE standards:

- IEEE Std 1620™-2004 “IEEE Standard Test Methods for the Characterization of Organic Transistors and Materials”
- IEEE Std 1620.1™-2006 “IEEE Standard for Test Methods for the Characterization of Organic Transistor-Based Ring Oscillators”

The following main conclusions were drawn from the discussion. Since OTFT-devices and integrated OTFT-circuits still differ significantly in their technological maturity, a distinction was made in discussing “performance standards” and “application standards”, respectively.

- On the OTFT-device level it turned out the IEEE Std. 1620 performance standard is a starting point. However, there is a need to specify in greater detail static measurement procedures, esp for solution-processed devices, which means to provide not only figures of extracted parameters (e.g. mobility) but the measurements and how they have been recorded as the oe-a guideline from Sept. 2008 suggests. Furthermore a clear need was identified to establish additional performance standards, which will specify dynamic and life time measurements protocols for OTFT-devices within the next two years.

- For OTFT-based systems - like for instance active matrix backplanes for e-paper or RFID - already existing “application standards” and “interoperability standards” must be identified, evaluated and potentially adopted for organic semiconductor applications. Care must be taken not to generate new “organic electronic” standards, which might result in competing with existing standards.

Currently only a few, highly vertically integrated companies are pushing OTFT-based applications into the market. Due to this situation likelihood is high that for the time being rather “proprietary / de facto standards” will evolve, instead of standards formed by standards development organizations.

The standards road mapping process will be continued and the next workshop is foreseen to talk place in the second half of 2010.

If you like to join the task force on OTFT standards preparation, please contact Dr. Carsten Winnewisser (CSEM), carsten.winnewisser@csem.ch or Dr. Thomas Hollstein (TU Darmstadt) thomas@mes.tu-darmstadt.de.

The PRODI session of the workshop was dedicated to roll-to-roll (R2R) manufacturing systems for devices of organic and large-area electronics (OLAE) with respect to special requirements for production systems, measurement and automation. In a plenary part, the main findings of a requirement analysis for R2R manufacturing of organic thin-film transistors (OTFTs) for display applications were presented. In an interactive part, input for a roadmap towards R2R measurement and control in manufacturing systems for OLAE devices was gathered. With respect to OTFTs, the discussion yielded the following main results:

- First, there was general agreement that manufacturing systems have to be related to appropriate device configurations such as active-matrix backplanes.
- Second, relevant relations between in-line controllable process parameters (thickness, roughness, charge carrier mobility), their figures and size scales (mm, μm , nm), as well as device performance have to be identified.
- Third, a clear mapping to appropriate inspection techniques has to be done. There was agreement that in the field of production metrology, such techniques are in manifold already present or at least in progress.

The results of the interactive session will enter the PRODI 2010 roadmap activities on manufacturing and production systems for OLAE devices.

If you are interested in this topic, please contact: info@project-prodi.eu



There is no news for this issue, please check the website for updates on this project.

Go to <http://www.polymap.eu/>

PolyNet

[News from the PolyNet Platforms](#)

Research Cooperation Platform – Results 2009 & Research Collaborations for the third year selected

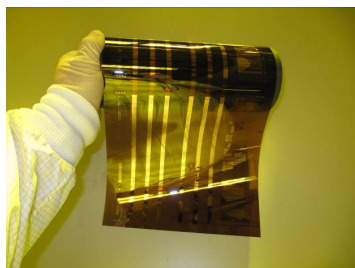
Six multilateral research collaborations have been running during 2009, all of them presenting results in a series of reports at the end of the year.

The collaboration on Laser-Ablative Microstructuring has focused on laser ablation of indium-tin oxide (ITO) electrodes on flexible substrates. Investigations have resulted in a processing window that allows patterning of ITO for structured OLEDs. The example in the figure shows a light emitting PolyNet logo.

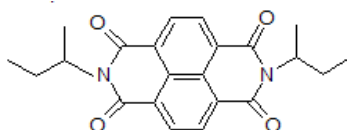


In the Thin Film Batteries collaboration, patterned positive and negative battery electrodes have been printed and characterized, with the aim to identify the best-practice option(s) to manufacture rechargeable batteries by successive printing of its components. Furthermore, the industrial requirements of printed batteries have been explored through a questionnaire aimed at industrial end-users.

The collaboration on Nanoimprint Lithography has made a joint effort to realize all the production steps necessary to fabricate organic TFTs with sub- μm resolution in a roll-to-roll process. The research has included R2R imprint and lift-off, coating of dielectric, and R2R compatible organic vapour-phase deposition. Functional transistors have been made and a third batch of samples has been planned and started. The image shows a roll with patterned gate electrode covered by dielectric.

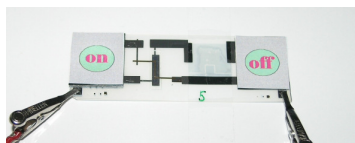


Fabrication of organic layers with well defined morphology by use of unconventional solution-based methods has been the focus of the Multifunctional Materials collaboration. Devices have been obtained on the base of naphthalene and perylene derivatives, rubrene and thiophene oligomers. Flexible n-type transistors with a mobility of $4 \times 10^{-2} \text{ cm}^2/(\text{V s})$ have been demonstrated based upon naphthalene bisamide NTCDI-C4 (see figure).



The efforts on Modelling have focused on analytical description of transient behaviour in TFTs, comparing polycrystalline and disordered material. Advantage is taken of the wide range of data available through the partners involved in this collaboration. The results have been presented in a total of 4 conference reports during 2009.

Finally, the Integration collaboration has aimed at the demonstration of a functioning sensor system that converts a sensor signal to a visually detectable output. In a joint effort, we have successfully realized a fully integrated sensor with display indicator controlled by OTFT on a Teonex substrate. We have proven that printing technology can be combined with other deposition method such as spinning, sputtering, and evaporation by careful planning. A fully functional demonstrator is shown in the image below.



As a result of the collaborative activities within the PolyNet collaboration on nanoimprint lithography, the potential for continued development was realized and a full FP7 project application was prepared. This has now resulted in acceptance of the FP7 project POLARIC in the procedure of call 4. The project has been kicked off 14 to 16 January 2010. The tasks in POLARIC are continuing the work of the NIL collaboration on a much broader scale. As a consequence, the PolyNet collaboration on NIL will not be continued in 2010.

During 2010, a set of five research collaborations has been jointly suggested by the PolyNet partners. The collaborations proposed to run during 2010 are:

- Integration of Laser-Ablative Microstructuring into R2R Printing Technology: High-throughput large-area laser processing

- Structural analysis of R2R-fabricated thin film batteries (TFB's) from process and product side: Printing of Zn-laccase batteries
- Ordered layers and wires of organic semiconductors for large area flexible electronics
- Modelling
- Integration of printed and organic electronics: Integration of components and subsystems & integration of printed batteries.

Contact Research Platform: Isak Engquist (isak.engquist@itn.liu.se), Linköping University, Sweden

Service Platform

For request to the PolyNet Service Platform please use <http://www.noe-polynet.eu/public/services/contact-form>

Contact Service Platform: Markku Käsäkoski (markku.kansakoski@vtt.fi), VTT, Finland

Knowledge Platform

EOOE (European Observatory on Organic Electronics) report No. 3 with selected topics and Conference reports is available: <http://www.noe-polynet.eu/public/knowledge/eooe-results/eooe-report-no-3/>

Selected public articles are:

Devices

Cambridge Univ.: On insulators for organic FETs written by H. Sandberg / Sweden

Paul Scherrer Inst.: Contact doping in metal-organic semiconductor devices written by R. Gwoziecki / France

Processes – Manufacturing

Prüftechnik Alignment Systems: Paralign, a new technology to determine the parallelism of web leading written by U. Fügmann / Germany

Report on the existing training programs for students and young researchers in the field of Organic and Large Area Electronics is available on the PolyNet web site: <http://www.noe-polynet.eu/polynet/public/knowledge/education-training/ED-report-v2-1>.

The industrial members of the European Organic and Large Area Electronics Community are experiencing currently a growing demand of well-educated personal for the emerging industry. To gather broader information about the European situation the Quadriga projects Polynet and PRODI developed in close cooperation with the Organic Electronics Association a questionnaire which was sent to about 500 institutions, companies and individuals using the communities of POLYNET, PRODI, OPERA, POLYMAP, OE-A and ORGAPVNET.

The goal of the questionnaire was to collect broader information about needs of the industry and offers from the institutions of education in Training and Education in Large Area Electronics in Europe as a whole and foster the network of the community. About 50 detailed responses corresponding to a response rate of 10 % representing answers from 16 European countries were documented and analysed for the report.

PolyNet Events & Exhibition

• ICOE 2010 (22. - 25.06.2010 – Paris, France / icoe@univ-paris-diderot.fr) with one day summer school focused on OLAE design and simulation

• ISFOE 2010 (<http://isfoe.physics.auth.gr/> - 7.-09.07.2010 - Halkidiki, Greece) with four day summer school on all OLAE topics

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 PolyNet Coordinator

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FlexNet

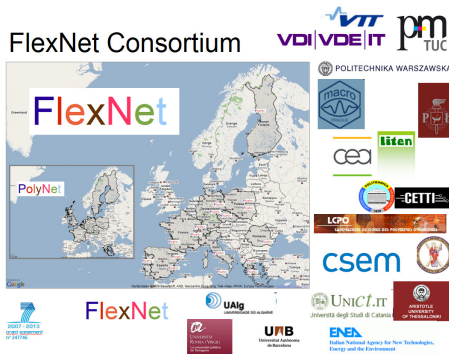
NEWS from NoE FlexNet

About NoE FlexNet

The NoE FlexNet (Network of Excellence for the Exploitation of Flexible, Organic and Large Area Electronics / FOLAE) aims at interlinking Europe's FOLAE-expertise in the domains of science, technology development, components, devices and systems integration technologies. Focal points will be:

- Definition of critical research issues regarding materials, devices and systems integration
- Subsequent commercial exploitation of FOLAE-based systems knowledge, predominantly through SMEs in southern and eastern Europe
- Application of FOLAE-specific organic semiconductors and supporting materials for OTFTs
- Establishing know-how on Devices Characterisation, Modelling and Design of Systems, and Manufacturing Processes for Systems
- Three core platforms to support these aims

FlexNet will work in close contact with coordination actions like the Quadriga projects and NoE PolyNet. FlexNet partners origin mainly from South and East Europe:



The NoE FlexNet started with the Kick-Off meeting which took place at the Institute of Macromolecular Physics of the Czech Academy of Science in Prague (partner IMC) from 27. – 28.01.2010



The NoE FlexNet is structured into three platforms:

Platform on Materials and Devices Integration

The Materials and Devices Integration Platform will be dealing with critical research issues such as FOLAE-specific materials with emphasis on their interfaces and integration into FOLAE devices:

- organic semiconductors
- dielectric devices
- electrodes

- barrier materials
- substrates

This progressive work will also be tracked by demonstrators.

Contact Materials and Devices Integration Platform: Jacek ULANSKI Jacek.Ulanski@p.lodz.pl / Technical University of Lodz, Poland

Platform on Systems Integration

By means of the Systems Integration Platform critical research issues will be identified from the fields of characterisation, modelling and integration into processes. This work is progressive by nature and will be tracked by demonstrators as well.

Contact Systems Integration Platform: Terho KOLOLUOMA
Terho.Kololuoma@vtt.fi / VTT, Finland

Platform on Knowledge, Dissemination and Transfer to Industry

The FlexNet Platform on Knowledge, Dissemination and Transfer to Industry will build-up a FOLAE knowledge network and disseminate this knowledge towards industry and higher education. The build-up of increasing knowledge will be monitored by several reports and digests. The knowledge will be disseminated to industry in several actions. New knowledge and dissemination of FlexNet activities will be made available to students and industries. For the work of FlexNet it is crucial having an observatory for the external landscape. It will be an important task of this platform to compare the landscape outside of FlexNet with the developments and knowledge inside. The observatory will be in operation during the whole project and publish reports twice a year.

Contact Knowledge, Dissemination & Transfer Platform: Bertrand FILLON bertrand.fillon@cea.fr / CEA, France

For more information: www.noe-flexnet.eu

Contact FlexNet Coordinator

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PRODI announces three educational events 2010

Having completed the work on mapping out requirements on roll-to-roll manufacturing equipment for organic solar cells, printed displays and OTFTs, the PRODI experts are happy to announce three distinguished education and training events for 2010:

- 1) PRODI Workshop “Applications and Physical Modelling of Devices of Organic and Large-Area Electronics”

- Date: July, 12-13, 2010

- Venue: IMEC, Leuven, Belgium

- This event is a knowledge platform for R&D professionals from academia and industry who are active in the field of Organic and Large-Area Electronics. Cutting-edge challenges of design, simulation and physical modelling of OLAE devices will be discussed. Talks by selected speakers are foreseen.

- 2) PRODI Autumn School 2010 “R2R Technologies for Devices of Organic and Large-Area Electronics”

- Date: Oct 4-6, 2010

- Venue: Fraunhofer IZM, Munich, Germany

- This intensive course is laid out as an introductory platform for R&D professionals from academia and industry, especially those who are entering the field of Organic and Large-Area Electronics or have recently joined. The program consists of introductory lectures by top experts in the field, a poster session, and a lab tour to the IZM facilities

- 3) PRODI Annual Seminar 2010 “PRODI in dialogue – Evaluation of production systems for Devices of Organic and Large-Area Electronics”

- The seminar is a platform for R&D professionals from academia and industry to discuss recent results of PRODI with the PRODI experts. It will be held in connection with another event to be determined.

- Date: November 2010 (t. b. d.)

- Venue: t. b. d.

More information will be disclosed soon on the web site (www.project-prodi.eu) or can be obtained via e-mail (info@project-prodi.eu).

4. General News



Plastic Electronics Foundation announcement: Dresden 2010 Conference

6th Global Plastic Electronics Conference & Exhibition **Messe Dresden, Germany, October 19-21, 2010**

Dear Colleagues & Friends

We cordially invite you to mark the 6th edition of our event in your calendar. The Plastic Electronics Conference & Exhibition will be organized for the second consecutive year in the city of Dresden, one of the major research centers and industrial hubs in electronics in Europe.

The event will be part of a full week of events organized in the period between October 18 through 22, 2010 with the focus on innovations in electronics under the common label “Converging Electronics Week 2010”. More information will be available soon, when the joint website www.converging-electronics.org becomes operational.

The two highlight events of the Converging Electronics Week 2010 will be co-located at the Messe Dresden and are expected to draw a large attendance of professionals within the electronics research community and electronics industry worldwide.

Plastic Electronics Conference & Exhibition, October 19-21, 2010
Semicon Europa Exhibition & Conference, October 19-21, 2010

Plastic Electronics is an enabling, and exciting new field of technology with a multitude of applications. The technology is expected to have a systemic impact on the way we will live, work and entertain in the future, together with a major impact on the greening of the economy. Research, development and engineering are progressing rapidly in the field of organic electronics, advancing the technology from the labs and fabs into the marketplace.

The Plastic Electronics Conference & Exhibition, being the largest convention in this field, is the forum to meet with other professionals with the same interests, both from research and industry. For the first time, we combine the exhibition with a full scientific conference.

This conference will include five topical areas which are:

Organic and mixed organic/inorganic electronics

Displays and lighting

Organic photovoltaics

Integrated and organic smart systems

Printed electronics

The conference will have both an industry-oriented program and a full scientific program with peer review. Based on

the combination with the Semicon Europa Exhibition & Conference, the leading tradeshow in the semiconductor industry and additional events to be announced for the same week, there will be added value for every participant. Bookmark this event in your calendar and take part at the leading event in this sector.

Important Dates you won't want to miss:

June 15, 2010 Deadline Abstract Submission

July 15, 2010 Deadline of Early Bird Registration Fees

Take advantage of the attractive registration fees in this scientific sector

Category Registration Fee (early) before July 15,

2010 Registration Fee

(regular)

after July 15, 2010 Registration Fee

(on-site)

Regular Fee 585,00 EUR 685,00 EUR 785,00 EUR

Student Fee 325,00 EUR 425,00 EUR 525,00 EUR

Further details to the conference can be found on our website which will be updated regularly.

www.plastic-electronics2010.com

We are looking forward seeing you in Dresden in 2010!

Congress Organizer

Ed van den Kieboom

Plastic Electronic Foundation

OTB Display, Luchthaven 10

5657 JA Eindhoven, The Netherlands

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Dear Colleagues,

Welcome to the next International Krutyn Summer School on OLED & OPV technology. Please, be so kind to distribute this info within your potentially interested colleagues. More information on the website. Details below:

**VII International Krutyn Summer School 2010,
Krutyn, Masurian Lake District, Poland, June 22-28, 2010**

<http://ikss.ichf.edu.pl/OLED2010/>

“ORGANIC OPTOELECTRONICS ON THE MOVE”

Going large, flexible, and efficient

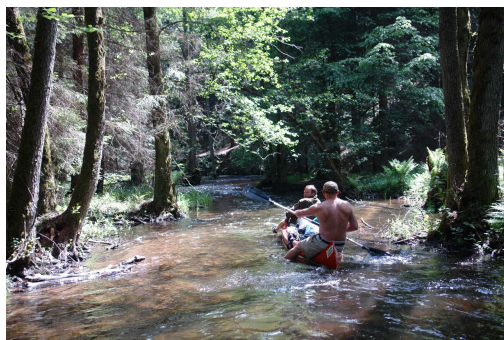
IMPORTANT DEADLINES:

Deadline for registration: April 15h

Deadline for abstract/poster: April 15th

Deadline for fee payment: April 30th

Deadline for presentations upload: April 25th



Organizers:

FP7 Projects: OLED100.eu & Fast2Light

The Polish Supramolecular Chemistry Network Foundation

The Institute of Physical Chemistry of the Polish Academy of Sciences

Thank you in advance for your kind cooperation in disseminating this information.

With my best personal regards,

Prof. Marek Pietraszkiewicz

Director of the IKSS Series

Dr. Tom Pearsall, Dr. Stefan P. Grabowski for the OLED100.eu project

Dr. Mary Kilitziraki, Dr. Edward Young, Prof David Gethin for the Fast2Light project

Stefan.Grabowski@philips.com

LOPE-C



May 31 – June 02, 2010
Congress Center, Messe Frankfurt, Germany

LOPE-C 2010

Large-area, Organic and Printed Electronics Convention
Frankfurt, Germany, May 31-June 2, 2010

LOPE-C - Large-area Organic and Printed Electronics Convention

- Covers the latest commercial and technological achievements in organic, inorganic and printed devices, systems and materials.
- LOPE-C represents the entire industrial value chain - academic research to R&D to production to commercialization to end-user cultivation.
- LOPE-C is the official annual conference and exhibition of the OE-A.
- Join more than 800 attendees and 75+ exhibitors at LOPE-C 2010.

LOPE-C 2010 includes:

- Business conference
- Main conference
- Exhibition
- Pre-conference seminars

www.lope-c.com

www.oe-a.org

IS-FOE10

7-9 July 2010, Eagles Palace Hotel, Ouranoupoli, Greece

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

Abstract Submission Deadline: 20 April 2010!

IS-FOE is the premier Scientific & Research event in Organic Electronics and it is organized by LTFN and the Plastic Electronics Foundation, whereas it is supported by the Projects Flexonics, OLAtronics, PolyNet and OPERA.

This year's IS-FOE will take place in Eagles Palace Hotel (www.eaglespalace.gr), a fantastic resort in front of the beach at the foot

of Mount Athos of Halkidiki, and almost ~120 km from the Macedonia Airport.

The IS-FOE10 will consist of several events, including:

- Plenary & Keynote Presentations
- Oral Presentations
- Main Scientific Symposium including peer-reviewed sessions and round tables for discussion
- Special Sessions with top-level presentations from EC Project representatives
- Poster Sessions
- Exhibitions from several companies in the field
- Special Session: Strategy and R&D Projects in Europe, USA and Asia in Flexible Organic Electronics!

The IS-FOE is the premier scientific & research event in the areas of flexible organic electronics and showcases the latest developments in the fields of:

- Organic electronic materials (small molecule & polymers)
- Organic Multifunctional Materials
- Organic/inorganic and hybrid materials and systems
- Flexible substrates & encapsulation methods & materials
- Molecular electronics & Photonics
- Self-organized molecules and systems
- Theory & Modelling (materials, components and devices)

- Manufacturing processes (printing, vacuum, chemical) & quality control processes
- Flexible Displays & Lighting
- Flexible Solar Cells & Batteries
- Flexible Circuits & Sensors
- Flexible RFIDs & Smart Textiles
- Integrated Smart Systems

Submission of Abstracts

To submit your abstract, download the IS-FOE10 ABSTRACT TEMPLATE from:

http://isfoe.physics.auth.gr/documents/IS-FOE10_ABSTRACT_TEMPLATE.doc

Abstracts must be sent by e-mail to: alask@physics.auth.gr

Selected papers presented in IS-FOE will be published after peer-review in an International Scientific Journal.

For more details, please visit the IS-FOE10 website: <http://isfoe.physics.auth.gr>

On behalf of the Organizing Committee we look forward to your submissions.

Best Regards,

Stergios Logothetidis

IS-FOE Chairman

[SID-Mid Europe Chapter Spring Meeting in Dresden on March 18/19, 2010](#)

'Personal Projection Displays - OLED and MEMS and new technologies for HMD, HUD and pico-projectors'
Sponsoring opportunities still available

Dear colleagues and display enthusiasts,

The SID Mid Europe Chapter organizes yearly spring and fall meetings with technical and scientific presentations, attracting many European display professionals. The 2010 spring meeting will focus on different aspects of Personal Projection Displays based on OLED and MEMS devices, and their applications in Head-mounted Displays (HMD), Head-up Displays (HUD) and pico-projectors. Basic OLED and MEMS technology will be covered as well as electronic and optic components and systems or applications in consumer multimedia, automotive, industrial and security markets.

The 2010 SID-ME ! Spring Meeting will be organised by Fraunhofer IPMS in Dresden on March 18-19, 2010.

The preliminary programme as well as further details on the conference, the location and registration process is available at

www.ipms.fraunhofer.de/sidme2010

Please note that sponsorship opportunities are still available - don't miss this unique opportunity to bring your company into the center of attention.

Details on the sponsorship opportunities as well as details on the exhibition can be found here:

<http://www.adria-network.org/files/SID>

If you are interested, please contact sidme2010@ipms.fraunhofer.de as soon as possible.

With best regards from Frankfurt,

Dr. S! usanne Bieller

on behalf of the adria team

Sponsorship opportunities

Preliminary programme

adria secretariat

c/o VDMA - The German Engineering Federation

German Flat Panel Display Forum (DFF)

Lyoner Str. 18

D-60528 Frankfurt am Main

Germany

Phone: +49-69 6603-1592 +49-69 6603-1592 +49-69 6603-1592 +49-69 6603-1592
Fax: +49-69 6603-2592
eMail: secretariat@adria-network.org
Internet: www.adria-network.org

Positions Vacant

Vacancy: Post-doc

Research Project: Hybrid Optoelectronic and Photovoltaic for Renewable Energy.

Tasks:

- 1) Design and manufacture of nanostructured organic solar cells.
- 2) Theoretical modelling and optical and electric characterization.

Time length: 6 months, renewable

Salary: 20.815,28 euros/year before taxes Application due date: february 17th, 2010

link: <https://seuelectronica.urv.cat/treballar-a-la-urv/convocatories-pdi/27/convocatoria-per-a-la-contractacio-d%E2%80%99un-investigadora-postdoctoral-departament-d%E2%80%99enginyeria-electronica-electrica-i-automatica>

For more information please contact me at the e-mail josep.ferre@urv.cat



5. How to join the Quadriga Associated Network Members

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

Quadriga Events Calendar

Encapsulation Standardization Workshop Announcement

24 February 2010

Eindhoven, The Netherlands

A joint workshop between the Organic Electronics Association (OE-A) and the OPERA EU project on the topic of "Encapsulation standardization" will be held during the OE-A working group meeting from 08.30 to 13.00 on February 24th 2010 in Eindhoven, the Netherlands.

Please email to ingrid.willam@vdma.org if you want to join the workshop.

More information about the oe-a working group meeting is found at: www.oe-a.org.

TITV-Konferenz zum Thema Potenziale für HighTech-Textilien

25 - 26 February 2010

<http://www.titv-greiz.de/>

SID-ME Chapter - Spring Meeting 2010

18 - 19 March 2010

Quality Hotel Park Plaza Dresden, Germany

<http://www.ipms.fraunhofer.de/en/y2010/sidme/>

SPIE - Photonics Europe

12 - 16 April 2010

The Square Conference Centre, Brussels, Belgium

<http://click.reply.spie.org/?qs=842248c53d7d84a9ab7d02d5bfc5db922c53947b084cf6e5900dd0ac2646845b7a207f81fcc1b2d4> to view full programme

http://spie.org/x12290.xml?WT.mc_id=REPE102AE for website

ISOS 2010

International Summit on OPV Stability

Roskilde, Denmark

19 - 23 April 2010

More information to follow - follow new on the OPERA website:

<http://opera-project.eu/index.php?id=16&lang=EN>

Polymers In Photovoltaics 2010

20 - 22 April 2010

Maritim Hotel, Cologne, Germany

www.amiconferences.com

LOPE-C 2010

31 May - 2 June 2010

Frankfurt, Germany

Large-area, Organic and Printed Electronics Convention

www.lope-c.com

www.oe-a.org

Imec Technology Forum (ITF2010)

8 - 10 June 2010.

The Hilton Antwerp, Belgium

<http://imec.fb.email.addemar.com/c752/e77608/h0c9c0/113235/index.html> for more information and to register.

VII International Krutyn Summer School 2010

22 -28 June 2010

Krutyn, Masurian Lake District, Poland

<http://ikss.ichf.edu.pl/OLED2010/> and <http://ikss.ichf.edu.pl/OLED2010/>

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International Conference on Organic Electronics ICOE 2010

June 22-25, Université Paris Diderot, Paris, France and ICOE Summer School

22 - 25 June 2010

Université Paris Diderot, Bâtiment Buffon, rue Hélène Brion, 75205 Paris cedex 13, Paris, France

For further details please email: icoe2010@univ-paris-diderot.fr

3rd International Symposium on Flexible Organic Electronics (IS-FOE10)

7-9 July 2010

Eagles Palace Hotel, Ouranoupolis, Halkidiki, Greece. (located on the eastern peninsula "Athos".)

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

IS-FOE Summer School

7 - 9 July 2010

Eagles Palace Hotel, Ouranoupoli, Greece

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

Abstract Submission Deadline: 20 April 2010!

6th Global Plastic Electronics Conference & Exhibition

19 - 21 October 2010

Messe Dresden, Germany

<http://www.plastic-electronics2010.com/>

www.converging-electronics.org

The next issue of the Quadriga Newsletter will be released in JUne 2010. 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 June 8th 2010.

We would like to thank all contributors for their work.

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

Disclaimer:

The Quadriga Newsletter is published under the responsibility of the four Quadriga Partners in the capacity of an editorial board. The Quadriga Partners cannot be held responsible for any 3rd party contributions.

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