



Photonics & Organic Electronics Newsletter

September 2011



<http://cordis.europa.eu/photonics>

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Changes in the Photonics Unit

We would like to inform you of the following personnel changes in the Photonics Unit:

- **Michel Hordies** has been nominated Deputy Head of Unit in INFISO Unit G1 "Nanoelectronics". We wish him every success in his new role.
- **Martyn Chamberlain** has joined the Unit. He came from RTD Unit G3 "Materials". Martyn will be mainly responsible for the further development of R&D in Solid State Lighting.
- **Tanya Nikolova** will soon join the Unit as a new Project Officer in photonics.
- **Elisa Reynolds** and **Malene Aalling** will leave the Photonics unit in September 2011.

We wish them all every success in the continuation of their career.

Photonics & OLAE: New R&D funding Opportunities

The **ICT - Call 8 and the FoF Call 2012** under the ICT FP7 2011-12 Work Programme were launched on 20th July 2011. The call features three thematic R&D initiatives related to photonics and OLAE:

- **ICT Call 8 – Objective 3.5 Core and disruptive photonic technologies** (92 M€), covering Core photonic technologies; an ERANET-Plus action; and a Pre-Commercial Procurement action (objectives 3.5 a), c) and d) respectively). The deadline for proposal submission is the 17th January 2012.
- **FoF Call 2012 – Objective 7.1 Smart factories: energy-aware, agile manufacturing and customisation:** one of four subtopics (estimated ≈10 M€ of 40 M€) is covering



lasers and laser systems for manufacturing and materials processing. The deadline for proposal submission is the 1st December 2011.

- **FoF Call 2012 – Objective 7.2 Manufacturing solutions for new ICT products, in particular OLAE (20 M€).** The deadline for proposal submission is the 1st December 2011.

For preproposal checks you can send a preproposal check form (see for the template in Annex 6 of the Guide for applicants accessible from here <http://ec.europa.eu/research/participants/portal/page/cooperation?callIdentifier=FP7-ICT-2011-8>) by email to INFSO-PHOTONICS@ec.europa.eu clearly indicating in the subject line the call and call objective you are referring to. **The deadline for submitting your preproposal to the Photonics unit is 3 weeks before the respective closure dates.**

Green Paper on Solid State Lighting

As part of the [Digital Agenda for Europe](#) the Commission will publish in the coming weeks a Green Paper on Solid State Lighting (LED and OLED based) and launch an open consultation on this topic. In this Green Paper the Commission will outline a number of new policy initiatives and initiate a public debate in Europe on how to accelerate the pace of SSL take-up in Europe and how to further support the innovation and competitiveness of the European lighting sector. The Green Paper will also link to the Photonics Key Enabling Technologies initiative and the next EU Research and Innovation framework Programme 'Horizon 2020' (2014-2020).

A large number of stakeholders, including researchers and developers active in this field, consumers and professional users, the lighting and construction industries, the buildings sector, architects, lighting designers, electrical installers and public authorities will be invited to provide their contributions to the consultation.

We seek in particular YOUR views and input into the consultation and will keep you posted on the Green Paper publication and the launch of the open consultation on our website and through a dedicated mailing action.

The road to Horizon 2020 and to a PPP on Photonics

As many of you are aware, the new Framework Programme for Research and Innovation will be called Horizon 2020 and will cover the years 2014-2020.

In its proposal for the Multiannual Financial Framework for the years 2014-2020, the European Commission has proposed a budget of €80 billion for Horizon 2020. This is an increase of 50% over the budget for Framework Programme 7 (2007-2013) which was €53 billion.

The Commission's legislative proposals on Horizon 2020 are expected to be published on 30th November 2011. The next step, which will take place over the next year, is that the proposal will be discussed with the European Parliament and the Council of the European Union.

Those of you who gave your input to the public consultation "Green Paper on a Common Strategic Framework for future EU Research and Innovation Funding", and anybody interested, can find a summary of the results on the Horizon 2020 web page http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=home

In order to increase the visibility of Photonics within Horizon 2020 a photonics Public Private Partnership (PPP) is being discussed.

At the Photonics21 Annual Meeting in February 2011, Vice President Neelie Kroes invited the community to make a proposal for a photonics PPP. Photonics21 made a proposal in June. In July, Vice President Neelie Kroes accepted the principle and invited Photonics21 to submit a concrete proposal for a photonics PPP. Over the next few months Photonics21 and the Commission will be working together on such proposal, including defining the strategic objectives of the PPP, its governance structure and key performance indicators to be put in place for monitoring its progress. The next Photonics21 annual meeting (March 27 and 28, 2012) will be a milestone event where the progress towards a Photonics PPP will be reviewed.

A photonics PPP will result in greater visibility for photonics in Horizon 2020 and also a closer working relationship between the Private Sector (including industry, research and academic partners) and the Public Sector (the European Commission). This opportunity is an acknowledgement of the economic importance of photonics and the strength of the European photonics community.

You will be receiving more information about progress made in defining a photonics PPP over the next few months.

KETs initiative: latest news

The KETs High Level Group has handed over its final report and recommendations to the European Commission on the 28th of June. The Final Report was warmly welcomed by Vice-Presidents Antonio Tajani and Neelie Kroes and Commissioner Maire Geoghegan-Quinn. We expect that the Key Enabling Technologies will be well represented in Horizon 2020, as well as on other relevant policies of the EU.

The Commission will report back on the KET policy recommendations in a communication at the beginning of 2012. The final report of the KETs High Level Group can be found at

http://ec.europa.eu/enterprise/sectors/ict/key_technologies/kets_high_level_group_en.htm

3 demo actions on SSL are selected from the CIP call on SSL

The 5th call for proposals of the Competitiveness and Innovation framework Programme, (CIP), was closed on 30th May. The photonics unit was involved mainly in the objective 1.1 *Innovative lighting systems based on Solid-State Lighting (SSL)*. The call was open for large scale "flagship actions" demonstrating the benefits of using advanced SSL solutions in a range of different applications and settings.

A total of 13 proposals were submitted requesting more than 30 M€ of EU funding against 10 M€ available. 3 proposals have been invited for negotiation in view of an EC Contract. They cover several pilot sites in complementary areas of lighting, be it indoor, outdoor or street lighting. Their clustering and further networking and cooperation will make them flagships to demonstrate the broad range of possibilities of SSL.

The new projects are expected to start in late autumn 2011 or early 2012. Further information on these projects will be provided soon.

23 new Photonics and OLAE R&D projects are launched following ICT Call 7

ICT Call 7 comprised of two research objectives, one in Disruptive photonics technologies and one in OLAE.

Following the results of the call, in the photonics field, 8 STREPs for 'Disruptive photonic technologies' and 4 Coordination and Support Actions (CSAs) were selected for EU funding and are about to be launched for a total amount of 30 M€. Also, an extension of the ongoing IP project PARADIGM will be funded to strengthen cooperation across the enlarged European Union. An overview of these new projects is shown in the table underneath.

3.5b STREPS Disruptive photonic technologies STREP	FIREFLY, NAVOLCHI (optical interconnects)	
	CHARMING, ISLA (fiber lasers)	
	TERATOP (Tera-hertz imaging)	
	ERMES (transmitters for access networks)	
	CLARITY (components for mid infrared sensing)	
	NANO-VISTA (nano-imaging)	
	11.3 IP	PARADIGM-Enlarged EU (Strengthening the PARADIGM IP and its impact in the enlarged EU)
	3.5d - CSAs Coordination and support actions CSA	ASPICE (coordination between regional/national photonic clusters and platforms)
InnoPho21 (coordination of Photonics21)		
ESSenTIAL (access to advanced technologies)		
SMETHODS (optical design and simulation training for SMEs)		

In the OLAE field, following the ICT Call 7, 10 new projects are about to be launched for a total amount of 50 M€ EU funding.

The largest part of funding goes to organic photovoltaics with two IP projects (SUNFLOWER and X10D) on low cost efficient solar cells and one STREP project (ROTROT) on roll-to-roll manufacturing of solar cells. Two STREP projects, IMOLA and SCOOP cover respectively OLED technology on flexible substrates and large area lighting and displays for innovative visualisation systems. In the field of printed flexible electronics, one IP project (Flexibility) deals with organic components for multifunctional systems and one STREP project (TDK4PE) is developing a technology and a development kit for printed electronics. Finally, in the area of smart textiles, one STREP project (i-TEX) is developing LEDs in coated textiles.

The ERANET-Plus project OLAE+ brings together eight countries (Austria, Belgium, Germany, Israel, Poland, Spain, Sweden and the UK) and will be calling for project proposals in the area of organic and large area electronics. The call is foreseen in autumn 2011 and will have a budget of up to 18 M€ funding. More information about this call will be available at <http://www.olaepplus.eu/>.

The Coordination Action (COLAE) will coordinate regional clusters and competence centres across Europe to promote take-up of the OLAE technology, provide training, establish a feasibility network and provide services to the OLAE community.

An overview of these new projects is shown in the table below.

IP	Organic Photovoltaics	SUNFLOWER	X10D	ROTROT
STREP	OLED Lighting		IMOLA	SCOOP
	Printed flexible Electronics		Flexibility	TDK4PE
	Smart Textiles		i-TEX	
EN+	ERA-NET Plus Action		OLAE+	
CSA	Increase coherence of OLAE research SME and Researcher support Education and training International cooperation		COLAE	

Further detail on all these projects will be available soon on the webpage http://cordis.europa.eu/fp7/ict/photonics/projects-fp7_en.html

Report presenting OLAE Innovation Clusters and Competence centres is now available

A report presenting the OLAE innovation clusters and competence centres has just been published. It is the result of collaboration between the FP7 ICT OPERA Coordination Action and the Photonics Unit.

Today there are more than 17 OLAE clusters and competence centres established in 13 European countries (AT, BE, CH, DE, ES, FIN, FR, GR, IT, NL, PT, SE, UK) and some more are about to be launched. Such clusters and competence centres provide a host of services to their members and in particular to SMEs: from awareness creation of business opportunities to interested companies, to advice in understanding OLAE technology and the way it can be beneficial to their business and from coordinated training to technological and infrastructural support.

The report provides an overview of the analysis of the competencies, synergies, and complementarities between the OLAE clusters and competence centres. Some conclusions and recommendations are also drawn, which are applicable to all OLAE clusters in Europe, and could thus be considered as a roadmap for their further growth and expansion in the future. The report is accessible here http://cordis.europa.eu/fp7/ict/photonics/docs/reports/eu-report-olae-clusters-sept2011_en.pdf.

Workshop on Photonics SMEs held in Brussels on 20 June

A one-day workshop on Photonics SMEs with invited experts took place in Brussels the 20th June 2011. The workshop was a brainstorming meeting on activities for SMEs in the Photonics and Organic Electronics fields that could be included in the ICT work programme 2013 as well as preparing for the new Framework Programme for Research and Innovation, Horizon 2020, starting in 2014. Experiences were drawn from previous relevant SME actions and important ingredients for successful SME innovation actions were discussed. The workshop conclusions and presentations are available as from September 2011 at http://cordis.europa.eu/fp7/ict/photonics/workshop-sme20062011_en.html

OLAE Concertation meeting held in Thessaloniki (GR) on 13 July

The 2011 Organic and Large Area Electronics concertation meeting took place in Thessaloniki, Greece, on 13 July in conjunction with the 4th International Symposium on Flexible Organic Electronics (ISFOE11, 10 to 13 July).

The concertation meeting permitted to report on the status of the latest FP7-ICT-call 7 on OLAE and the 10 successful projects were briefly presented. Moreover, topics of general interest to the OLAE projects were discussed.

A majority of participants favoured the combination of concertation meeting with an international conference and proposed to have the next meeting at international events such as ISFOE.

Photonics21 Work Group 1 Workshop held in Brussels on 28 July

Work Group 1 'information and communication' of Photonics21 held its mid-year workshop in Brussels on 28 July. Besides the update from Photonics21 and the update from the Commission there were two important items on the agenda: discussion of the joint white paper on Next-Generation Optical Networks with the Net!Works platform and discussion about the Digital Village proposal. After the discussion an agenda was agreed to further develop both items with input from the attendees (<http://www.photonics21.org/AboutPhotonics21/workgroup1.php>).

5th meeting with Photonics Regional Clusters and National Technology Platforms

The Photonics Unit is organising the fifth (annual) meeting of the "Photonics regional innovation clusters and national technology platforms" in Paris on 4th October 2011. The aim of the meeting is to enable the innovation clusters and platforms and the European Technology Platform PHOTONICS21 to meet each other to exchange information and best practices and to discuss topics of potential interest to them. The specific objectives of the meeting are as follows:

- Present the latest progress of photonics clusters/platforms activities since last year's event.
- Inform cluster representatives of the latest research and innovation initiatives in the field of photonics in Europe and exchange views on the way forward.

For further information and enrolments please contact [gabriella.leo\(at\)ec.europa.eu](mailto:gabriella.leo(at)ec.europa.eu)

Nanophotonics Foresight report is out

In November 2010 leading researchers gathered in Barcelona to discuss the future research direction of nanophotonics. The outcome of this Foresight Workshop, hosted by the Nanophotonics Europe Association, can be found in its latest report at www.nanophotonicseurope.org

Project News

Phasors (PHase sensitive Amplifier Systems and Optical RegeneratorS and their applications)

The FP7-ICT Phasors project ended on June 2011 and has successfully completed its activities on fibre based Phase Sensitive Amplifiers (PSA). Based on these PSAs three subsystems have successfully been built and demonstrated, namely: ultra-low noise amplifiers, phase sampling and optical regeneration of phase modulated signals. Results achieved gave rise to the publication of three peer reviewed articles in the prestigious Nature Photonics Magazine. In the ECOC 2011 conference in Geneva (18-22 September), two invited presentations will cover the main results from the project, while more specific outcomes will be covered in several regular papers and posters in the same conference. <http://www.eu-phasors.eu>

Pof-plus (Plastic Optical Fibre for Pervasive Low-cost Ultra-high capacity Systems)

The FP7-ICT POF-PLUS project ended in May 2011. The project focused on developing new photonic components and transmission technologies for large core plastic optical fibre (POF) systems, aiming at the unprecedented implementation of tens of Gbps transmission over this medium. The main results are fully engineered systems working at 1Gbps over at least 50 meters; a proof of concept demonstration of multi-Gbps over 50 meters (from 4 to 10 Gbps); and, a proof of concept demonstration of 10Gbps transmission over tens of meters using parallel optic solutions (multi core and ribbon cables) and reliable transmission of selected radio-over-fibre systems (UWB signals). <http://www.ict-pof-plus.eu/>

Diary of Events

Advances in Photovoltaics

Organised by the **IOP Ion and Plasma Surface Interactions Group**
14th September 2011, London, UK

ECOC 2011

37th European conference and Exhibition of Optical communication
18-22 September 2011, Geneva, Switzerland

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(Subject: PHOTONICS Newsletter)

Diary of Events

[Plastic Electronics Conference & Exhibition 2011 & Semicon Europa Conference & Exhibition 2011](#)

11-13 October 2011, Dresden, Germany

[20th PHOTONEX Exhibition & Conference](#)

UK's largest dedicated exhibition for the optics, photonics and vision technologies.

18-19 October 2011, Coventry, UK

[SciTech Europe: Advancing Research, Innovation and Collaboration](#)

24 November 2011, Brussels, Belgium

[SciTech Europe: Advancing Research, Innovation and Collaboration](#)

7-8 December 2011, Lyon, France