



Photonics & Organic Electronics Newsletter

January 2012

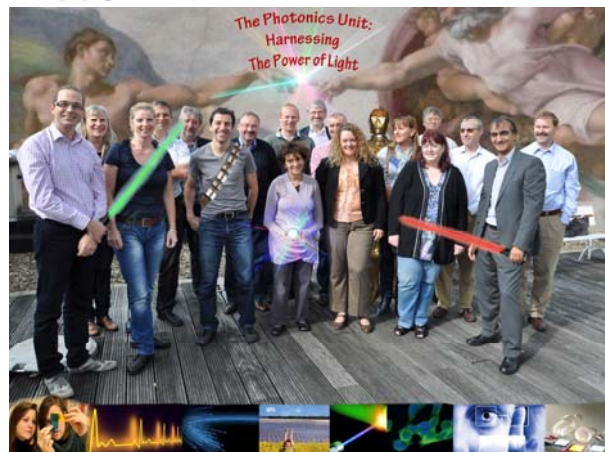


<http://cordis.europa.eu/photonics>

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Happy New Year 2012 !



The Photonics Unit wishes you a Happy New Year 2012!

Green Paper on Solid State Lighting and public consultation

As part of the [Digital Agenda for Europe](#), on 15 December 2011 the European Commission adopted a [Green Paper](#) and launched a [public consultation](#) on the future of LED-based lighting in Europe. In the Green Paper, the Commission proposes measures to speed up the deployment of this innovative and eco-friendly lighting which saves energy and money while offering a good quality of light, and to foster the global leadership position of the European lighting industry. *We encourage you all to share your views on how to overcome existing challenges for wider market uptake of LED-based lighting solutions. Your answers will help us to further develop a European strategy in this field.* The public consultation is open till 29 February 2012 and is available at: http://ec.europa.eu/information_society/digital-agenda/actions/ssl-consultation/index_en.htm



ICT Work Programme 2013

2013 will be the last year of FP7. Preparations for the ICT work programme 2013 have started with the drafting of an orientations paper for discussion with the delegates of the member states (ICT-Committee) on 25th January.

The work programme text will be drafted from January to early April, the final adoption is expected for June and a first call is planned for July 2012.

The work programme will follow two main strategies:

Completion of FP7 (e.g. filling gaps from previous FP7 calls and considering new technical developments); and, bridging the next framework programme 'Horizon 2020' (e.g. by including strong innovation activities, in particular targeted at SMEs).

The photonics unit has received significant inputs from the Photonics21 working groups and held a meeting with working group representatives on 24th November. Further inputs are expected by the end of January. These inputs together with the above-mentioned strategies will be the basis for drafting the 2013 work programme text in photonics. Please contribute to this process of defining the contents of the ICT work programme 2012 through the Photonics21 working groups!

Photonics in Horizon 2020, the new EU Framework Programme for Research and Innovation for 2014-2020

The European Commission has published its proposal for Horizon 2020, the new EU Framework Programme for Research and Innovation (R&I). Running from 2014 to 2020 with a budget of €80 billion, Horizon 2020 aims to create new opportunities for growth and jobs in Europe.

Horizon 2020 will be focused on three key priorities: **Excellent Science** (€24.6 billion), **Industrial Leadership** (€17.9 billion) and **Societal Challenges** (€31.7 billion).

The Industrial Leadership priority includes a particular emphasis on the Key Enabling Technologies, including photonics. The proposal foresees a possible budget of €1.8 billion for photonics and nanoelectronics together. Of particular note is that the Horizon 2020 legal text includes the possibility of launching **a public-private partnership (PPP) in photonics**. Such a PPP will mean in practice establishing a partnership based on a contractual arrangement between private sector partners and the EU.

The Commission's proposal for Horizon 2020 now goes to the European Parliament and the European Council for discussion and negotiation. The Parliament and council are responsible for the final decision on Horizon 2020.

Further information on Horizon 2020 can be found at the following link:

http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=press

2011 Call on Factories of the Future

The call "Factories of the Future" - 2012 closed on 1 December 2011. ICT Objective 7.2 "Manufacturing solutions for new ICT products" (essentially Organic and Large Area Electronics and Photonics) received 11 proposals for integrated projects for a total requested amount of €80.3 million. Under the ICT Objective 7.1 "Smart Factories: Energy-aware, agile manufacturing and customisation" 10 proposals were received in relation to lasers and laser systems for manufacturing and materials processing. The evaluation of all these proposals will take place in January and February 2012 and negotiation of successful proposals will start in April 2012. More details on the evaluation and the selected proposals will be provided in our next Newsletter.

Results from new study on "Green Photonics"

A study on "Photonics Technologies and Markets for a Low Carbon Economy - SMART2010/0066" will shortly be completed. It was carried out by Optimat (UK) in collaboration with the National Physical Laboratory-NPL (UK) InGaN Research (UK), CIP Technologies (UK) and TWI (UK).

The study identifies a series of green photonic technologies in the five areas of Photovoltaics, Efficient lighting & displays, Energy efficient communications, Clean manufacturing and Advanced sensors & instrumentation. It assesses Europe's market positioning in these technologies, their potential for further development and large uptake, the expected socio-economic and environmental impact and their importance to the low-carbon economy. The study also identifies the main barriers for this uptake and provides recommendations on how to overcome them.

The study concludes that green photonics is already a multibillion global market which is expected to grow for the foreseeable future and where Europe has an established position in all five areas.

Related to the Europe's 2020 objectives, Photovoltaics for instance can contribute with up 12% of the generated electricity, and Solid State Lighting can contribute with 40 to 70 % energy savings compared to current lighting technologies.

The final report of the study will shortly be available on <http://cordis.europa.eu/fp7/ict/photonics/docs/reports/>

The Annex on "Efficient lighting & Displays" is already available on http://ec.europa.eu/information_society/digital-agenda/actions/ssl-consultation/index_en.htm as supporting document to the Green Paper on SSL.

The Photonics21 2012 annual event: 27-28 March in Brussels

The Photonics21 annual event, the landmark event of the Photonics community in Europe, will be held on 27 & 28 March 2012 at the Hotel Husa Resident Park, Brussels.

The focus of the event will be clearly on Horizon 2020 and the founding of a Photonics Public Private Partnership (PPP). The event will start on 27th March with an evening reception and the "Photonics21 Student Innovation Award 2012 Ceremony" with the General Assembly taking place on the 28th March.

Ms Neelie Kroes, Vice-president of European Commission and Commissioner for the Digital Agenda, will provide the keynote speech at the General Assembly.

For the agenda see:

http://www.photonics21.org/download/Annual_Meeting/AnnualMeeting2012/DraftAgendaPhotonics21AnnualMeeting2012.pdf

We look forward to seeing you all there!

SPIE Photonics Europe: 16-19 April 2012 in Brussels

Photonics Europe is taking place from 16 - 19 April 2012 in the Square Brussels Meeting Centre in Brussels. The event comprises of an international conference and exhibition and offers you the following programme: 1,500 presentations - The latest research from 18 conferences and Hot Topics in Photonics Sessions; Plenaries on important developments in the field; Innovation Village and European Village; Visiting stands of Start-ups in motion; and, meeting opportunities with vendors supporting photonics research. For more information <http://spie.org/x12290.xml>

OLAE+ Call for R&D proposals is now open

OLAE+ is an ERA-NET Plus in the area of Organic and Large Area Electronics. It is a joint funding initiative by the European Commission and several EU national funding agencies and regions. OLAE+ has launched a call for proposals with a deadline for the first stage (short) proposals on January 31st, 2012 (13:00 CET). This €18 million competition is open to participants from Austria, Catalonia, Flanders, Germany, Israel, Poland, Sweden and the UK (the participating countries and regions).

More information on this call is available at <http://www.olaepius.eu>

Representatives of the Photonics Regional Clusters and National Technology Platforms meet with the Photonics Unit

The 5th meeting between the Photonics Unit and Representatives of Photonics Clusters and National Platforms was held in Paris on 4th October 2011. The meeting was hosted by CNOP (the French Comité National de l'Optique et de la Photonique) and was attended by Representatives of 27 regional clusters and national platforms from all over Europe as well as from Photonics21. Newcomers in the field are the Swedish, the Irish and the Finnish national technology platforms and the Tuscany regional cluster "OPTOTOSCANA", which were all set up recently.

At the meeting representatives from several clusters and platforms provided an overview of their recent activities, which are increasingly focusing on SMEs and aiming at partnering SMEs along the photonics value chain as well as on SME financing, training, and aid to export and to business operations. The two newly launched FP7 ICT projects, Innopho21 and ASPICE were also presented. Both are about coordination activities of national platforms and inter-cluster cooperation. The meeting served also as a platform for discussing the role of clusters in the innovation cycle, the relevance of the trans-national cooperation of clusters and platforms and the EU added value from such cooperation.

The next meeting of photonics clusters and national platforms will take place in Brussels on 29th March 2012 back-to-back with the PHOTONICS21 annual event. To read more about the Photonics Clusters and National Platforms meeting, see: http://cordis.europa.eu/fp7/ict/photonics/clusters_en.html.

Entrepreneurship in Photonics 2012

To stimulate and support innovative entrepreneurship in the domain of photonics the Brussels Photonics Team (Vrije Universiteit Brussel) organizes the third edition of its Intensive Training "Entrepreneurship in Photonics". The event will take place in Brussels, from Monday 5 March until Wednesday 14 March 2012. For more information, please visit <http://www.b-phot.org/www/Events>.

Project News

MARISE (Materials for Avalanche Receiver for ultimate Sensitivity)

The FP7-ICT MARISE project (<http://www.ict-marise.eu/>) ended in July 2011. The project aimed at demonstrating avalanche photodiodes (APDs) with high-sensitivity and large-bandwidth. MARISE managed to push the limits of available APDs in two directions: low noise and higher speed. The research focused on APDs for applications such as broadband access (10 and 40Gb/s transmission) and single photon detection. The two large band-gap III-V materials of interest were: AlGaAs and AlInAs. The goal was to work with a wavelength range relevant for optical communication: between 1.3 and 1.6 μ m. In several areas, in particular for the APDs based on AlInAs material for 1.55 μ m, the consortium has exceeded the stated objectives.

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OLED100.eu

The FP7-ICT project OLED100 (<http://www.OLED100.eu/>) which ended in November 2011 celebrates the achievement of important advancements in bringing organic light-emitting diodes (OLEDs) closer to market introduction in general lighting. The research consortium has developed a large-area OLED luminaire that consists of nine 33 × 33 cm² OLED tiles.

In addition it has realised high efficiency OLEDs based on Novald PIN OLED technology and out-coupling materials showing 60lm/W which are more efficient than first generation energy saving lamps. Also long lifetime OLEDs demonstrating 10,000 hours have been realised. Work on standardisation of measurement procedures for OLEDs has also been carried out, which now serve as a basis for work of the International Commission on Illumination CIE standards body.

DOTSENSE (Group III-nitride quantum dots as optical transducers for chemical sensors)

The FP7-ICT project DOTSENSE (<http://www.dotsense.eu/>) was a 3-year project which was successfully completed in April 2011. It brought together three universities, one research organisation and an industrial player (EADS). The project developed innovative all-optical chemical sensor devices based on novel nano-structured material systems for the pH-value detection in fluids and for the detection of hydrogen and hydrocarbons in gases. Target applications included onboard water monitoring, hydraulic fluid monitoring and fuel- and hydraulic leak detection in commercial aircrafts. The worldwide first pH-sensitive all-optical sensor based on this material system was successfully demonstrated. This sensor met and even exceeded all specifications required for the application in commercial airplanes. Several companies have shown interest in the commercialisation of these sensors.

Diary of Events

[6th Photonics21 Annual Meeting 2012](#)

27-28 March 2012 - Brussels, Belgium

[SPIE Photonics Europe 2012](#)

16-19 April 2012 - Brussels, Belgium

[International Conference on Simulation of Organic Electronics and Photovoltaics \(SimOEP12\)](#)

10-14 June 2012, in Oliva, Valencia. Spain

[ICOB 2012, International Congress on Biophotonics](#)

19-21 June 2012, Jena, Germany

[LOPEC 2012,](#)

19-21 June 2012, Munich, Germany