

Focus on Flexible Organic Electronics

The science and technology of Organic Electronics is characterized by interdisciplinarity since they combine Physics, Chemistry and Engineering into a common base in order to unleash the potential of organic materials for the development of state-of-the-art electronic devices. The emergence of organic semiconducting and conducting materials as an interdisciplinary field, has led to several advances on the synthesis, thin film preparation of these materials and on the understanding of their mechanisms that dominate their optical, electrical, and electronic properties, their solubility and processability by vacuum, wet and printing techniques.

These advances will enable the fabrication of low-cost organic electronic devices onto flexible polymeric sheets by high-throughput processes. This will lead to novel applications for visualization of information and lighting (organic light emitting devices), energy generation (organic photovoltaics), electronics and communications (thin film transistors), batteries, and sensors. Moreover, the capability for fabrication of flexible organic electronic devices by solution-based (e.g. printing) processes to large-areas by roll-to-roll technologies will increase the production volume and throughput and will reduce the costs and furthermore the device market price.

Despite the significant progresses in materials and processes for organic electronics, the understanding of the optical, electrical, structural properties, stability and functionality of active and passive materials can be achieved by the establishment of a strong multidisciplinary approach. This can be realized by bringing together experts in Chemistry, Physics, Material Science, and Engineering, to overcome the constantly increasing scientific and technological challenges, and to exchange ideas that will boost forward this rapidly emerging field.

The 2nd International Symposium on Flexible Organic Electronics (IS-FOE09) that took place during 8–10 July 2009 in Halkidiki, Greece, hosted several internationally acknowledged scientists in the fields of Organic Electronics, who presented and discussed their accomplishments on this multidisciplinary field. During this event, strong scientific discussions and interactions between scientists, researchers, and engineers have contributed to the understanding of the structure-property relationships of organic and hybrid materials as well as to the realization of prospects of large-scale processes and applications of flexible organic electronics. In addition, experts and representatives from R&D projects presented their achievements as well as the Strategy of Europe, USA and Asia in Organic Electronics, open and upcoming calls, platforms, results from meetings, policies and priorities.

The present issue of *European Physical Journal Applied Physics* comprises a selection of papers presented in specific subjects with the aim to give an overview of the amount and the quality of the more than a 124 presented works during IS-FOE09. All delegates renewed their appointment to meet again next year in IS-FOE10 that will take place at 6–9 July 2010 in Ouranoupolis, Greece.

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