

Conference Report

10th International Conference on Frontiers of Polymers and Advanced Materials:
Septembre 29-October 2, 2009 - Santiago de Chile, Chile

J. Ulanski

General Summary

The 10th ICFPAM was a sequel to the previous highly successful International Conferences on Frontiers of Polymers and Advanced Materials. The conference provided a unique scope involving a blend of science, technology and business. The conference was truly multidisciplinary and global. Leading international scientists, engineers, top-level industrial management and business executives were discussing on the status of advanced materials, new technologies and industrial and business opportunities.

Session 4 was devoted to *Polymeric Materials and Composites for Plastic Electronics and Solar Energy Conversion*. 26 oral contributions and many posters were presented at this session. Some of the papers which have attracted special attention and induced interesting and fruitful discussion are listed below.

Highlights

* "How do highly conducting films of plastdoped polyaniline bridge the gap between polymers & organic crystals" by **D. Djurado** (CEA, Grenoble) in which large anisotropy of free-standing PANI films was described (plastdoped PANI forms ordered stacks \perp to the film surface).

"Features of polaronic charge carriers in polysilanes: experimental and theoretical approach" by **S. Nespurek** (IMC, Prague) in which it was shown that the temperature and electric field dependences of charge carrier mobility allows to distinguish between polaron and polaron-free transport.

"Graphene: a 2D dream coming true" by **E. Dujardin** (CNRS - CEMES, Toulouse) giving overview on potential applications of graphene, like transparent electrodes made of mixtures of PEDOT with graphene

"Alternative fabrication techniques for OFETs" by **H. Von Seggern** (Technische Universität Darmstadt) in which it was shown that *n*- and *p*-type transport can be initiated in OFET with the same Organic Semiconductor by gate-dielectric interface modification.

"Electrical doping in organic semiconductors" by **J.J. Kim** (Seoul National University) in which new *p*-type dopants (rhenium oxide, ReO₃, and copper iodide, CuI) and *n*-type (rubidium carbonate, Rb₂CO₃) were introduced into electron and hole transporting layers, respectively, allowing to produce several high performance OLEDs (phosphorescence p-i-n, tandem, top-emission, 'white' OLEDs).

"Polymer-semiconductor nanocomposites by controlled crystallization" by **J. Ulanski** (Technical University of Lodz, Lodz) in which simple methods of producing polymer/Organic Semiconductor composites suitable for OFETs were presented.

"Synthesis of new arylene bisimides and their application in all organic FETs" by **P. Gawrys** (Warsaw University of Technology, Warsaw) in which series of naphthalene and perylene bis-imides were described, suitable for OFETs.