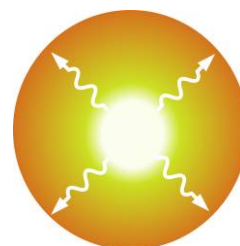


Preface



ICOOPMA10

ICOOPMA10 is the fourth in the ICOOPMA series, an International Conference on Optical, Optoelectronic and Photonic Materials and Applications (also known as The International Conference on Optical and Optoelectronic Properties of Materials and Applications), originally sponsored by Springer, that was held for the first time in Darwin, Australia, in July 2006.

The ICOOPMA series arose from a need for such a conference for those researchers who sought a broadly attended international conference that covered a wide range of materials and applications in optics, optoelectronics and photonics. One of the goals is to provide discussions between researchers working on different classes of materials that have similar applications; or have been characterized by similar techniques. The conference had a large number of invited speakers to allow such cross-fertilization between researchers working on different classes of materials. The conference also seeks papers in interesting or novel applications, or papers that enhance material properties for applications. The International and Local Organizing Committees have the responsibility of ensuring an in-depth scientific coverage with invited and contributed papers from various countries and in various disciplines; and ensuring an enjoyable scientific program. The Second ICOOPMA was held in London, England, 29 July–3 August, 2007, and had over 250 participants, and five plenary lectures. The Third ICOOPMA was held in Edmonton, Canada, 20–25 July 2008, with nearly 250 participants and had seven plenary talks. TRILabs in Edmonton was responsible for organizing and managing the conference.

ICOOPMA10 took place in Budapest from 15 to 20 August 2010 where more than 300 papers were presented. There were three parallel oral sessions from Monday to Thursday as usual, and poster ses-

sions on Monday and on Tuesday to cover all the 300 papers. The program included six plenary lectures (Norbert Kroo, Mark Kuzyk, Hideo Hosono, Thomas Krauss, Michael Petty, Stephan Koch) and 48 invited talks. The current Proceedings represents a collection of papers that have been presented at the conference, and have been fully refereed for inclusion in the proceedings. With the agreement of the journal's Editor in Chief and the authors, a selection of papers have been published in *physica status solidi (a)*. The papers in this volume cover not only topics on fundamental concepts, including various optical properties (luminescence being the most popular) of a wide class of materials, e.g. organics, glasses, semiconductors, nanocrystals, quantum wells, wires and dots etc., but also a number of interesting applications from photonics modulators to X-ray detectors. During the closing address six best poster prizes were given to the authors, mostly to young researchers.

Timely publication of conference papers in an easily accessible journal is one of the attractions in presenting one's latest work at conferences. It allows the work to appear relatively quickly after it has been discussed at the conference. It is also important to ensure that proper refereeing has been done before a paper has been accepted. We specifically allowed paper submissions to continue well after the conference date to ensure that the papers included discussions during the conference. We thank the many referees who have unselfishly dedicated their valuable time in reviewing some hundred-ten manuscripts and, in many cases, reviewing the revised versions as well. We are grateful to the editorial team at Wiley-VCH, in particular Stefan Hildebrandt in Berlin, for their help in getting the proceedings out as soon as possible once the refereeing of the papers were complete.

ICOOPMA10 chairs are indebted to ASSZISZTENCIA Congress Bureau, Budapest being responsible for managing the conference and to Prof. Sefa Kasap for valuable help before, during, and after the conference.

The next conference, ICOOPMA12 will be held in Nara, Japan, 3–7 June, 2012.

Sandor Kugler, Budapest University of Technology and Economics, Hungary
Sandor Kökenyesi, University of Debrecen, Hungary

Guest Editors



Sandor Kugler



Sandor Kökenyesi



Group photograph at the ICOOPMA10, Monday, 16 August 2010

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Plenary Talks



Robert Kroo
Hungarian Academy of Sciences, Budapest, Hungary

There is light at the bottom



Mark Kuzyk
Washington State University, USA

Reversing the arrow of time via photonics using polymer-dye interactions



Hideo Hosono
Tokyo Institute of Technology, Japan

Doping issues for optoelectronic transparent crystalline and amorphous oxides



Michael Petty
Durham University, UK

Electronic and opto-electronic devices based on thin organic films



Thomas Krauss
University of St. Andrews, UK

Enhanced light-matter interaction with photonic nanostructures



Stephan Koch
Philipps University Marburg, Germany

Microscopic simulation of semiconductor laser devices