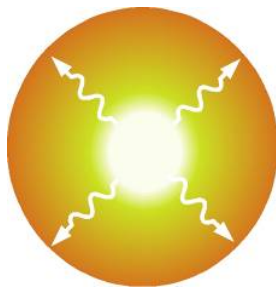


Fourth International Conference on Optical, Optoelectronic and Photonic Materials and Applications 2010

Fourth International Conference on
Optical and Optoelectronic Properties of Materials and Applications

ICOOPMA 2010

<http://www.icoopma.org>
<http://icoopma10.org>



ICOOPMA2010
15 - 20 August 2010
Budapest, Hungary

Budapest is the capital of Hungary in the middle of Europe where the Blue Danube separates the city into two parts, Buda and Pest. Its beautiful harmony is not only due to its location on the Danube but also its historical heritage with some of the best architectures in Europe. Visitors to Budapest leave with deep nostalgia and beautiful memories. Budapest has always been an important center for scientific meetings between the East and West. The conference will take place at the Conference Center in Budapest. Friday is the conference excursion.

An international conference on optical, optoelectronic and photonic materials for a wide range of applications from telecommunications to photovoltaics; and optical, optoelectronic and electro-optic properties of all classes of materials and material systems.



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Conference Proceedings to be published in Physica Status Solidi A and C

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SCOPE

Optical and optoelectronic properties of a wide range of materials and materials systems, such as single crystals, polycrystalline bulk and film samples, amorphous materials, organics, polymers, photonic crystals and nanostructures, quantum wells, wires and dots
Excitonic processes
Luminescence, Phosphors, Scintillators and Applications
Photoinduced effects
Electro-optic properties and applications
Nonlinear optical properties and applications
Materials for optoelectronics and photonics
Nano-optoelectronics and Nanophotonics
Photoconductivity, photogeneration, quantum efficiency
Optically induced processes
Optical fibers
Materials for optical storage
Photovoltaic materials
Experimental techniques
Optoelectronic and photonic devices
Optical components for telecommunications
Applications of materials in photonics and optoelectronics

SESSIONS

Optical properties of materials
General
Crystals
Polycrystalline bulk and film
Amorphous and organics
Nanostructures, including photonic crystals
Quantum Dots
Quantum Wires
II-VI and Related Semiconductors Including Alloys
III-V and Related Semiconductors Including Alloys
Oxide Semiconductors
Silicon Photonics
a-Si:H, a-SiN:H, a-SiC:H, a-SeGe:H
Nonoxide Glasses and Chalcogenide Glasses
ZBLAN and Oxyfluoride Glasses
Excitonic Processes
Luminescence, Phosphors and Applications
Photoinduced Effects and Applications
Photoconductivity and Photogeneration

Nonlinear Optical Effects and Applications
Electro-Optic Effects and Applications
Semiconductors for Optoelectronics (including wide bandgap materials) for applications in lasers, photodetectors, waveguides, modulators etc.
Light Emitting Devices (including organics)
Photonic and Optoelectronic Materials and Devices
Quantum Wells, Quantum Wires, Quantum Dots, Nanophotonics and Nano-Optoelectronics
Optical Storage
Photovoltaics (materials and devices, and their properties)
Waveguides and Fibers
Integrated Photonics
Experimental Techniques
Photoreflectance
Photonic Bandgap Materials and Nonlinear Photonic bandgap materials
Defect Spectroscopy
Femtosecond Spectroscopy
Optical Fibers and Fiber Sensors
Plasmons and Surface Plasmons
Selected Topics (e.g. Photocatalysis in Materials, Materials for Energy Conversion etc)

ICOOPMA HISTORY

ICOOPMA10 is the fourth in the ICOOPMA series, an International Conference on Optical, Optoelectronic and Photonic Materials and Applications, which was held for the first time in Darwin, Australia, in 2006. ICOOPMA07 and 08 were held in London, England (2007), and Edmonton, Canada (2008), and each had over 260 participants and seven plenary lectures. The ICOOPMA series arose from a need for such a conference for those researchers who sought a truly international conference that covered a wide range of materials and applications in optics, optoelectronics and photonics. 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. By tradition, the conference has a large number of invited papers from top researchers in various fields to review the advances and bring the audience up-to-date. The plenary and invited talks are the most exciting part of the scientific program; and for finding out the advances, challenges and the current problems. <http://icoopma.org>

VENUE AND CONTACTS

Budapest Conference Center

<http://icoopma10.org>

Sandor Kugler, Chair: kugler@eik.bme.hu
Sandor Kökenyesi, Co-Chair: kiki@tigris.klte.hu
Secretariat: icoopma@asszisztencia.hu

IMPORTANT DATES

Abstract Submission: 26 March 2010
Acceptance: 23 April 2010
Early registration: 14 May 2010

PLENARY TALKS



Hideo Hosono
Tokyo Institute of Technology
Japan

*Progress in Doping Issues for
Optoelectronic Transparent
Crystalline and Amorphous Oxides*



Mark Kuzyk
Washington State University, USA

*Reversing the Arrow of Time via
Photonics Using Polymer-Dye
Interactions*



Norbert Kroo
Hungarian Academy of Sciences
Budapest, Hungary

There is light at the bottom



Michael Petty
Durham University, UK

*Electronic and Optoelectronic
Devices Based on Thin Organic
Films*



Stephan Koch
Philipps University Marburg
Germany

*Microscopic simulation of
semiconductor laser devices*



Thomas Krauss
University of St. Andrews, UK

*Enhanced light-matter interaction
with photonic nanostructures*

INVITED TALKS

Jean-Luc Adam

Universite de Rennes (France)

Progress in nonoxide photonic glasses

Valery Barachevsky

Russian Academy of Sciences, Moscow (Russia)

*Light-sensitive organic recording media for 3D optical
memory*

Sergei Baranovski

Philipps University Marburg (Germany)

*Generalized Onsager-Frenkel recombination of
optically generated electron-hole pairs*

Nikolay Dmitruk

ISP NAS Ukraine, Kijev (Ukraine)

*Plasmonic photovoltaics: relief-induced transparency
& photocurrent enhancement by metal nanoparticles
on solar cell interface*

Andrew Edgar

Victoria University of Wellington (New Zealand)

*New Materials and Structures for Optical Detection of
Ionising Radiation*

Stephen Elliott

University of Cambridge (UK)

Recent result on phase-change memory

Mike Gal

University of New South Wales (Australia)

High quality optical devices made from porous silicon

Harold Haugen

McMaster University, Hamilton (Canada)

*Femtosecond Laser Ablation and Micromachining of
Semiconductors and Dielectrics*

Jong Heo

Pohang University of Science and Technology
(Korea)

Multiphase Semiconductor Quantum Dots in Glasses

Animesh Jha

University of Leeds (UK)

*Rare-earth doped tellurite glass near and mid-IR fibre
lasers*

Andrew Knights

McMaster University, Hamilton (Canada)
Sub-micron Silicon Photonic Device Structures

Joseph Salzman

Israel Institute of Technology, Haifa (Israel)
Nano-cavities in Diamond for Quantum
Electrodynamic Experiments

Krisztian Kohary

University of Exeter (UK)
Crystallisation kinetics of phase-change materials

Giancarlo Righini and Simone Berneschi

CNR, Institute of Applied Physics, Firenze and
Institute of Photonics & Nanotechnologies, Trento
(Italy)
*Erbium-doped glass-ceramic materials and
waveguides*

Roger Lewis

University of Wollongong (Australia)
Optical Rectification for Terahertz Generation

David Lockwood

NRC, Ottawa (Canada)
*Self-assembled silicon-germanium nanostructures for
CMOS compatible light emitters*

Pal Andor Maak

Budapest University of Technology and Economics
(Hungary)
*Novel acousto-optic devices targeting applications of
high standard*

Al Meldrum

University of Alberta (Canada)
Silicon quantum dots in optical microcavities

Maria Mitkova

Boise State University, Idaho (USA)
*Optically induced processes in chalcogenide glasses
- from visible light to x-rays*

Kazuo Morigaki, University of Tokyo (Japan) and

Harumi Hikita, Meikai University, Chiba (Japan)
*Stretched Exponential Relaxation Processes in
Hydrogenated Amorphous Silicon and Hydrogenated
Polymorphous Silicon*

Hiroyoshi Naito

Osaka Prefecture University (Japan)
*Localized-state distributions and charge carrier
mobilities of organic bulk heterojunction solar cells*

Arokia Nathan

University College London University (UK)
*Advances in Nanocrystalline Silicon Devices for
Optoelectronics Applications*

Diana Nesheva

Bulgarian Academy of Sciences, Sophia (Bulgaria)
*Photoluminescence from SiO_x layers containing
amorphous silicon nanoparticles*

Annie Pradel

Université Montpellier (France)
*IR waveguide based upon chalcogenide thick films
deposited by co-thermal evaporation*

Victor Ralchenko

Prokhorov General Physics Institute RAS (Russia)
*Chemical vapor deposited (CVD) diamond - the
material for optics and optoelectronics*

Ramaswami Sammynaiken

University of Saskatchewan (Canada)
*Secondary optical processes and application of x-ray
excited optical luminescence in medicine*

Jai Singh

Charles Darwin University (Australia)
*Advances in organic and polymeric light emitting
devices*

Oleh Shpotyuk

Institute of Materials of SRC, "Karat", Lviv (Ukraine)
*Pseudo-self-adaptive topological phases in glassy
selenides for IR photonics*

Stephen Sweeney

University of Surrey (UK)
*Novel III-V semiconductors for next generation
photonic devices*

Keiji Tanaka

Hokkaido University (Japan)
*Photodeformations in As₂S₃: from atomic, nano, to
macroscopic*

Janis Teteris

University of Latvia, Riga (Latvia)
Photoinduced Mass Transfer in Soft Materials

Heinz von Seggern

University of Darmstadt (Germany)
*Oxygen in CsBr:Eu, its influence on photostimulated
luminescence*

Rui Almeida

Instituto Superior Tecnico, Lisbon (Portugal)
*Properties and applications of sol-gel derived active
photonic crystals*

Lluís Marsal

Universitat Rovira i Virgili (Spain)
*Template-assisted fabrication and characterization of
photoluminescent conducting polymer nanopillars*

Lorenzo Pavesi

University of Trento (Italy)

Nanosilicon: a new platform for photonics

Emanuele Pelucci

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Fabrication and Characteristics of Site-controlled (111)B quantum dots by high purity MOVPE

Robert Horvath

Research Institute for Technical Physics and

Materials Science, Budapest (Hungary)

Optical waveguide biosensors for proteins and cells

Harry Ruda

University of Toronto (Canada)

Toward fundamental limits on the optoelectronic characteristics of single nanowires

Janos Volk

Research Institute for Technical Physics and
Materials Science, Hungarian Academy of Sciences,
Budapest (Hungary)

Highly ordered ZnO nanostructures for UV photonic devices

Janos Veres

PolyPhotonix (UK)

Organic semiconductors and light emitting diodes in applications

Andriy Kryuchyn

Institute for Information Recording, National
Academy of Sciences of Ukraine

Application of thin films of chalcogenide vitreous semiconductors in optical recording systems

Peter Domaschuk

University of Sydney (Australia)

Silk Photonics: Biopolymer Optofluidics and Applications

Alla Reznik

Thunderbay Regional Health Sciences Centre and
Lakehead University (Canada)

Recent advances in x-ray photoconductors: selected examples on PbO and a-Se

Yoonchan Jeong

Optoelectronics Centre, Univ. of Southampton (UK)

Recent advances in high power optical fibers

Mihail Trunov

Uzhgorod National University (Ukraine)

Photoplastic effect, giant photodeformation and
mass-transport phenomena in amorphous
chalcogenides

Darren Bagnall

University of Southampton University (UK)

Plasmonic and photonic light-trapping for photovoltaics

Wieslaw Krolikowski

Australian National University (Australia)

Second and Third Harmonic Generation in Nonlinear Crystals with Random Distribution of Ferroelectric Domains

Rolindes Balda

University of the Basque Country, Bilbao (Spain)

Luminescence properties of eutectic crystals and glasses activated with rare earth ion

Peter Brodie

Advantechus, Pittsburgh (USA)

Historical and Conceptual Roots of Active Matrix Technology: Science to Technology and AMOLEDs

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ICOOPMA PROCEEDINGS

Submitted papers will be refereed and accepted ones will be published in a special issue of the journal *Physica Status Solidi* (Wiley-VCH, Germany) within 8 months. The Proceedings will be edited by Guest Editors. The papers will be divided between PSS A and C, depending on contents and referee reports.



Guest Editors

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