Second International Conference on Optical, Optoelectronic and Photonic Materials and Applications 2007

ICOOPMA 2007
30 July – 3 August 2007

An international conference on optical, optoelectronic and electro-optic properties of all classes of materials and material systems; optical, optoelectronic and photonic materials for a wide range of applications from telecommunications to photovoltaics. Authors are invited to submit abstracts on line by 30 March 2007, using the web link:

http://www.icoopma.org

ICOOPMA07
London, England
30 July – 3 August 2007

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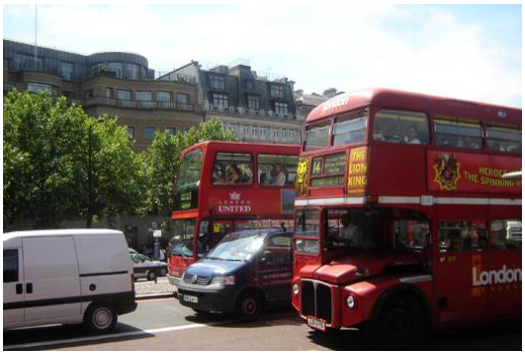

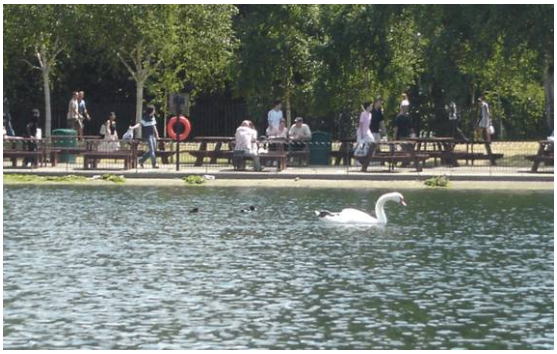

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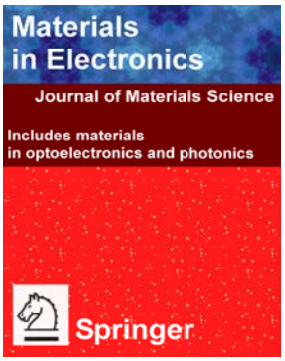

PROCEEDINGS

Editors: Stephen Sweeney (University of Surrey) and Steffi Krause (Queen Mary, University of London)

Presented papers will be refereed and will be published in a special issue of the

Journal of Materials Science: Materials in Electronics

ICOOPMA 2007

ICOOPMA07 is the second in the ICOOPMA series, and will be hosted by Queen Mary, University of London. The conference is co-sponsored by The Institution of Electrical Engineers and Technology, Springer and LG Philips Displays. London is the largest city in Europe offering a great mixture of cultures and unique experiences for visitors of all ages to enjoy its art galleries, museums and exciting buildings and monuments of historical importance.

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Piotr Petelenz,Cracow University, Poland
Robert Glosser, University of Texas, Dallas, USA
Mark Kuzyk, Washington State University, USA
Tomas Wagner, Pardubice University, Czech Republic
Chris Haugen, TR*Labs*, Edmonton, Canada
Younus Messaddeq, UNESP, Brazil
Armando Luches, Lecce University, Italy
Hideo Hosono, Tokyo Institute of Technology, Japan

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
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
Electro-optic properties and applications
Nonlinear optical properties and applications
Materials for optoelectronics and photonics
Nano-optoelectronics and Nanophotonics
Photoconductivity
Optically induced processes
Optical fibers and waveguides
Materials for optical storage
Materials for photovoltaics or solar cells
Photogeneration, quantum efficiency
Experimental techniques
Optoelectronic and photonic devices
Applications of materials in photonics and optoelectronics

IMPORTANT DATES

Abstract Submission: 30 March 2007
Acceptance: 23 April 2007
Early registration: Friday 11 May 2007

Manuscripts: Electronic submission online before or during the conference

REGISTRATION

ICOOPMA2007 Conference

Conference Registration Fees. *Includes meals*, except conference dinner (GBP40)

Full	**GBP 450** (GBP 575 after 11 May 2007)
Student	**GBP 250** (GBP 325 after 11 May 2007)
Exhibitor	**GBP 575** (GBP 675 after 11 May 2007)

PLENARY LECTURES

Sajeev John, University of Toronto, Canada
Photonic Band Gap Materials: Localization of Light

David Lockwood, FRS (Canada), NRC, Ottawa, Canada,
Light Emission in Silicon Nanostructures

Shuji Nakamura, University of California, Santa Barbara,
Current Progress of Solid State Lighting

Philip Russell, FRS, University Erlangen-Nuremberg, Germany, *Enhancing Light-Matter Interactions with Photonic Crystal Fibres*

Osamu Wada, Kobe University, Japan
Semiconductor quantum dots and nanostructures for photonic device applications

SELECTED INVITED SPEAKERS

Jean-Luc Adam, Universite de Rennes, France, *Chalcogen Based Glasses for Infrared Applications*

Carmen N. Afonso and Jose Gonzalo, Instituto de Optica, CSIC, Madrid, Spain, *Advanced Heavy Metal Oxide Film Glasses with Large Optical Nonlinearities*

Rui Almeida, Instituto Superior Tecnico, Lisbon, Portugal, *Rare-Earth Doped Photonic Crystals via Sol-Gel*

Claudia Ambrosch-Draxl, University Leoben, Austria, *Tailoring the Optical Properties of Organic Semiconductors*

Yasuhiko Arakawa, Institute of Industrial Science, Komaba, Japan, Advances In Quantum Dots for Nanophotonic and Quantum Information Devices

Sergei Baranovski, Philipps University Marburg, Germany, *Impact Ionization Phenomena in Disordered Systems Related to the Avalanche Multiplication and Switching Effect.*

Harbhajan Singh Bhatti, Punjabi University, India
Laser Induced Photoluminescence and Morphological Characterization of $Cd_{(1-x)-y}Zn_xMn_yS$ Nanocrystals.

Dietmar Borchert, Fraunhofer Institut fur Solare Energiesysteme ISE, Germany,
Interaction between process technology and material quality during the processing of multicrystalline silicon sloar cells.

Rudi Bruggeman, Carl von Ossietzky Universität Oldenburg, Germany, *Electroluminescence and Photoluminescence for the Characterization of Solar Cells*

Pere Roca Cabarrocas, Ecole Polytechnique, France
Low temperatre plasma deposition of silicon thin films for solar cells

Giulio Cerullo, Institute for Photonics and Nanotechnologies, Milano, Italy, *Few-Optical-Cycle Pulses with Stable Carrier-Envelope Phase from Optical Parametric Amplifiers*

Isabel Cristina dos Santos Carvalho, Pontifical University Catholic of Rio De Janeiro, Brazil, *New Glassy Materials for Sensors & applications*

Jamal Deen, McMaster University, Canada
High Sensitivity Photodetection Systems for Biological/Medical Applications

Ananth Dodabalapur, The University of Texas at Austin, USA, *Organic and Polymer Thin-Film Transistors: Recent Advances*

Jaroslav Fabian, University Regensburg, Germany
Semiconductor Spintronics Devices

Miloslav Frumar, University of Pardubice, Czech Republic
Phase change memory materials and the mechanism of their solidification

Shubra Gangopadhyay, University of Missouri - Columbia, Missouri, USA, *Novel Processes for Low Temperature Crystallization of a-Si:H and a-SiC:H for Optoelectronic Applications*

Michael Graetzel, ISIC, Switzerland and Ayodha N. Tiwari, University of Loughborough, UK,
Development of flexible dye sensitized solar cells: challenges and strategies.

Frank Hegmann, University of Alberta, Canada
Using Terahertz Spectroscopy to Probe Carrier Dynamics and Localization in Semiconductor Materials

Jong Heo, Pohang University of Science and Technology, Korea, *Novel nano-structured glasses containing semiconductor quantum dots*

Peter Hess, University of Heidelberg, Germany,
Spectroscopic and ellipsometric characterization of SiC films

Hideo Hosono, Tokyo Institute of Technology, Japan, *Low Work Function in C12A7 Electride and Its Applications*

Jorn Hvam, Technical University of Denmark,
Recent Advances in Nanophotonics

Richard Jones and Mario Paniccia, Intel, USA
Silicon Photonics: Materials and Devices, and Recent Advances

Raman Kashyap, Ecole Polytechnique, University of Montreal, Canada, *Progress in Bragg Grating Optical Fiber Sensors*

Junji Kido, Yamagata University, Japan, *Design and Fabrication of High Performance OLEDs for Lighting Applications*

Andrew Knights, McMaster University, Canada
Progress in Bragg Grating Optical Fiber Sensors

Krisztian Kohary, University of Oxford, Oxford, UK
Structural optimization of organi light-emitting diodes incorporating nancrystal quantum dots

Nobuyoshi Koshida, Tokyo University of Agriculture & Technology, Tokyo, Japan, *Photonic, Electronic and Acoustic Devices Based on Nanocrystalline Silicon*

S. Kugler, Budapest University of Technology & Economics, Hungary, *Microscopic and macroscopic models of Photoinduced volume changes in chalcogenides*

Miguel Levy, Michigan Technological University, Houghton, USA, *Magnetophotonic Crystals: Nonreciprocity, Birefringence and Confinement*

Roger Lewis, University of Wollongong, Australia, *Reflectance Studies of Candidate THz emitters*

Zhenghong Lu, Unniversity of Toronto, Canada, *Superluminescent Organic Light-Emitting Diodes*

Takayuki Makino, University of Hyogo, Japan, *Optical Properties of ZnO and Their Extension to the Ultraviolet Optoelectronic Application*

Walter Margulis, Acreo Fibre Optic Centre, Sweden.
Electrical control of light in fibre-based components

Stefan Matefi-Tempfli, Unite de Physico-Chimie et Physique des Materiaux, Universite Catholique de Louvain, Belgium
Nanowires and nanostructures fabrication using template methods. A step forward to real devices combining electrochemical synthesis with lithographic techniques

Stephen W. S. Mckeever, Oklahoma State University, USA
Induced Luminescence for Dosimetry: Recent Advances

Qingbo Meng, Chinese Academy of Sciences, China
Pressure controlled self-assembly of high quality opals and inverse opals.

Bill Milne and Alex Rhozin, University of Cambridge, UK, *Carbon Nanotubes for Photonic Devices*

Tanya Monro, University of Adelaide, Australia, *New Developments in Soft Glass Microstructured Optical Fibres*

Mayasuki Nagami, Nagoya Institute of Technology, Japan, *Nonlinear optical emission properties of sol-gel-derived glasses*

Hiroyoshi Naito, Osaka Prefecture University, Japan, *Characterization of Polymer Light-Emitting Diodes*

Maurizio Martino, University of Lecce, Italy, *Pulse Laser Deposition of Organic, Inorganic and Biological Materials*

Alex Moewes, University of Saskatchewan, Canada
Synchrotron characterization of Optical and Electronic Properties of Materials: Recent Advances and Examples

Dirk Poelman, Ghent University, Belgium, *Advances in Inorganic Phosphors for Displays and Lighting*

Jianrong Qiu, Zhejiang University, China
Broadband infrared luminescence and optical amplification of transparent glass-ceramics containing Ni2+-doped nanocrystals.

Mark Reed, Yale University, USA, *Plasmonic Waveguides: A New Approach to Sub-Wavelength Optics*

John Rowlands and K. Tanioka, University of Toronto, Canada and NHK, Japan, *Ultrasensitive HARP Video Tubes, Imaging Devices and Applications*

Michael F. Rubner, Massachusetts Institute of Technology
Thin film optical coatings from functional nanoparticle multilayers.

Harry Ruda, University of Toronto, *Transport and Optical Response of Single Nanowires*

Jas Sanghera and Ishwar Aggarwal, Naval Research Laboratory, Washington DC, USA, *Infrared Transmitting Glasses, Ceramics and Optical Fibers*

Heinz von Seggern, Darmstadt University
Mechanism of Long-lasting Photoluminescence Afterglow in Csl:Tl

Setsuhisa Tanabe, Kyoto University, Japan, *Glass Ceramic Phosphors for Solid-State Lighting*

Keiji Tanaka, Hokkaido University, Japan, *Photoinduced Phenomena in Group VIB Glasses*

Peter Tanner, City University of Hong Kong, *Developments and Applications of Ultraviolet and Vacuum Ultraviolet Luminescence of Lanthanide Ions*

Roberto Teghil, University of Basilicata, Italy
Femtosecond Pulsed Laser Deposition of Inorganic Electrochromic Materials

Michael Thewalt, Simon Fraser University, Canada, *Spectroscopy of Semiconductor Structures: Recent Advances*

Peter Thomas, Philipps-University Marburg, Germany, *Investigating Disorder in Semiconductor Quantum Structures using Angular Photonic Correlation in Spontaneous Emission*

Joe Trodahl and Ben Ruck, Victoria University of Wellington, New Zealand
Electronic and Optical Properties of Rare Earth Nitrides

M. Asfar Uddin and Andy Hau-Ping Chan, City University of Hong Kong, Hong Kong

The challenges in the fabrication of Polymer based photonic devices.

Joe Trodahl and Ben Ruck, Victoria University of Wellington, New Zealand
Electronic and Optical Properites of Rare Earth Nitrides

Ashok Vaseashta, Marshall University, Huntington, *Nanoscale Materials, Devices and Systems for Energy Generation and Storage*

Frank van Veggel, University of Victoria, Canada
Lanthanide (III) - Based photonic materials and their applications

Helge Werman, Norwegian University of Science and Technology, Norway, *Semiconductor Quantum-Wires and Nano-Wires For Optoelectronic Applications*

Ian White, University of Cambridge, UK
High Speed Quantum Dot Mode Locked Lasers

Michael Winokur, University of Wisconsin, USA, *The Role of Nematic Order in Conjugated Polymer Spectroscopy*

Mitsuo Yamaga, Gifu University, Japan.
Long-lasting phosphorescence in Ce-doped oxides.

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
Phgotoreflectance
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)

VENUE

The venue for the symposium is the Queen Mary London University Mile End campus. It is served by two underground (Metro) stations: Mile End on the Central Line, and Stepney Green on Hammersmith & City and District Lines