Third International Conference on Optical, Optoelectronic and Photonic Materials and Applications 2008

International Conference on
Optical and Optoelectronic Properties of Materials and Applications

ICOOPMA 2008

http://www.icoopma.org
http://icoopma2008.usask.ca

ICOOPMA08
Edmonton, Canada
20 -25 July 2008

TRLabs

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EDMONTON, ALBERTA, CANADA

http://www.edmonton.com

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. Edmonton is the capital of Alberta and is a thriving cosmopolitan city with many exciting things to do. It is close to Jasper Park and not far from the Canadian Rockies. The University of Alberta is one of the top universities in Canada. The conference will be held at the Lister Conference Centre on campus.

http://www.wildernessprints.com

http://www.wildernessprints.com

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David Lockwood, NRC, Ottawa, Canada
Helge Weman, Norwegian University of Science and Technology (NTNU), Norway

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 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
Materials for optical storage
Photovoltaic materials
Photogeneration, quantum efficiency
Experimental techniques
Terahertz materials, devices and techniques
Optoelectronic and photonic devices
Optical components for telecommunications
Applications of materials in photonics and optoelectronics

ICOOPMA HISTORY

ICOOPMA08 is the third in the ICOOPMA series, an International Conference on Optical, Optoelectronic and Photonic Materials and Applications, 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 truly 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 has a large number of invited speakers to allow such cross-fertilization between researchers working in 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.

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

Teraherz (THz) techniques, including materials, emitters and detectors

Optical Fibers and Fiber Sensors

Plasmons and Surface Plasmons

Selected Topics (e.g. Photocatalysis in Materials, Materials for Energy Conversion etc)

IMPORTANT DATES

Abstract Submission: 31 March 2008
Acceptance: 15 April 2008
Early registration: Friday 30 April 2008

PROCEEDINGS

Presented papers will be refereed and accepted ones will be published in a special issue of the journal *Physica Status Solidi A and C* (Wiley-VCH, Germany) within 8 months. The Proceedings will be edited by Guest Editors.

Safa Kasap
University of Saskatchewan

Frank Hegmann
University of Alberta

Harry Ruda
University of Toronto

Ray DeCorby
University of Alberta

Raman Kashyap
Ecole Polytechnique, Montreal

REGISTRATION

ICOOPMA2008 Conference

Conference Registration Fees *include the reception, all breakfasts and lunches during the week.* We would like the conference participants to use the breakfast and lunch to mix and interact. Registration fees:

Before 30 April 2008	
Full	**CD$ 685**
Student	**CD$ 385**
After 30 April 2008	
Full	**CD$ 750**
Student	**CD$ 425**

PLENARY TALKS

Eli Yablonovitch
University of California Berkeley, USA

Nano-Photonics, From Photonic Crystals to Plasmonics

Alexander Gaeta
Cornell University, USA

Photonic Nanowires: Ideal Waveguides for Nonlinear Optics

Jeff Young
University of British Columbia, Canada

Engineering Semiconductor Nanostructures to Miniaturize Nonlinear Optics

Kenkichi Tanioka
Vice-President, NHK, Tokyo, Japan

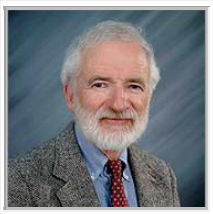
Ultra-Sensitive Imaging with HARP : From Concept to Realization at NHK

Yasuhiko Arakawa
University of Tokyo, Japan

Advances In Quantum Dots for Nanophotonic and Quantum Information Devices

Klaus Ploog
Paul Drude Institute for Solid State Electronics, Berlin, Germany

Prospects of Conventional and Dilute III-Nitrides for Light Emitters and Solid-State Lighting



Arthur Nozik
DOE National Renewable Energy Laboratory (NREL), Golden, Colorado, USA

Third Generation Photovoltaics

SELECTED INVITED SPEAKERS

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

Magnus Willander, Linkoping University, Sweden, *Light Emission from different Zinc Oxide Junctions and Nanostructures*

Hadis Morkoc, Virginia Commonwealth University, USA, *GaN Based Light Emitters*

Chennupati Jagadish, Australian National University, Canberra, Australia, *Nanowires for Optoelectronic Device Applications*

Mark Kuzyk, Washington State University, USA, *Transmitting Mechanical Forces on a Beam of Light*

Nobuyoshi Koshida, Tokyo University of Agriculture & Technology, Japan, *Silicon Innovations by Nanosilicon*

Mark Fox, University of Sheffield, UK, *Ultrafast Non-Linear Switching in AlGaAs Photonic Crystals*

Hideo Hosono, Tokyo Institute of Technology, Japan, *Doping Effects in Transparent Amorphous Oxides*

Andy Edgar, Victoria University of Wellington, New Zealand, *Novel Scintillating Materials for Radiation Detection and Imaging*

Stephen Mckeever, Oklahoma State University, USA, *Induced luminescence for Dosimetry: Recent Advances*

Arokia Nathan, University College, London University, UK, *Nanocrystalline Silicon Thin Film Transistors in Optoelectronics Applications*

Hans Georg Limberger, Ecole Polytechnique Federale de Lausanne, Switzerland, *Light Induced Stresses in Silica Fibers*

Robert Collins, University of Toledo, USA, *Optical Properties of Amorphous Semiconductors: Recent Advances*

Heinz von Seggern, University of Darmstadt, Germany, *Advances in Organics for OLEDS: Recent Selected Examples*

Hiroyoshi Naito, Osaka Prefecture University, Japan, *Optical Spectroscopic Studies of Polyfluorene and its Copolymers*

Jean-Marc Baribeau, NRC, Ottawa, Canada, *Advances in Self-Assembled SiGe Dots and Nanostructures*

Jong Heo, Pohang University of Science and Technology, Korea, *Tuning the Photoluminescence of Quantum Dots in Glasses*

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

Kazuo Morigaki, Hiroshima Institute of Technology, Japan, *Recombination Processes and Light-Induced Defect Creation in Hydrogenated Amorphous Silicon*

Mike Petty, Durham University, UK, *Towards Organic Solid State Lighting*

Aasmund Sudbo, UNIK – Universitetsstudiene pa Kjeller, Norway, *Photonic Crystal Films*

Leonid Tsybeskov, New Jersey Institute of Technology, Newark, USA, *Electro-Optics of Silicon Nanostructures*

Anderson Gomes, UFPE, Brazil, *Metallic Nanoparticles for Photnics and Bio Applications*

Matt Beard, NEWL (National Renewable Energy Laboratory), Bolden, Colorado, USA, *Multiple Exciton Generation and Photo-Induced Charge Transport in Three Dimensional Arrays of SemiconductorNanocrystals: Progress Towards Third Generation Photovoltaics*

Miloslav Frumar, Pardubice University, Czech Republic, *Recent Advances in Phase Change Memory Materials: Composition, Structure and Properties*

Noboru Yamada, Matsushita Electric Industrial Co Ltd, Japan, *Optical Data Storage: Technology and Recent Advances*

Osamu Wada, Kobe University, Japan, *Quantum Dots and Semiconductor Nanostructures for Photonic Signal Processing Devices*

Daniel Mittleman, Rice University, USA, *Terahertz Spectroscopic Studies of Metal Oxides*

Patrick Desjardins, Ecole Polytechnique de Montreal, Canada, *Bandgap Tuning of Quantum Dot Structures Using Grown-In Defects and Ion Implantation*

Yasufumi Fujiwara, Osaka University, Japan, *Injectiion-type Light-Emitting Devices fabricated by atomically controlled doping of Er to GaAs*

Paul Braun, University of Illinois, Urbana-Champaign, USA, *Adding Function to 3D Self-Organized Photonic Crystals through Materials Chemistry*

Peter Jepsen, Technical University of Denmark, *Terahertz Time-Domain Spectroscopy of Molecular Crystals and Liquids*

Yasushi Nanishi, Ritsumeikan University, Japan, *Potential Achievements and Issues of InN and Related Alloys for Device Applications*

Richard Blaikie, university of Canterbury, New Zealand, *Super-resolution Photolithography using Surface Plasmons*

Ruediger Goldhahn, Institut fur Physik, TU Iimenau, Germany, *Band Structure and Optical Properties of Nitride Semiconductors*

Rodrigo Martins, Universidade Nova de Lisboa, DCM/FCTUNL, Portugal, *Characterization of Optoelectronic Platforms using and Amorphous/Nanocrystalline Silicon Biosensor*

Sergei Baranovski, Philipps University Marburg, Germany, *Disorder Effects in Photoluminescence from Quantum Structures*

John Marsland, University of Liverpool, UK, *Imapact Ionization in Semiconductor: Recent Progress and Non-Local Effects*

Takayuki Komatsu, Nagaoka University of Technology, Japan, *Laser Patterning of Nonlinear Optical Single Crystal Lines in Glasses*

Vikram Dalal, Iowa State University, Ames, USA, *Physics and Status of Thin Film Si technology for Photovoltaic Energy Conversion*

Willie Padilla, Boston College, MA, USA, *Metamaterial Electronics: New Materials for Novel Devices*

Yasutake Ohishi, Toyota Technological Institue, Japan, *Novel Photonic Glasses for Future Optical Signal Processing*

Michael Fokine, Politecnico di Torino, Italy, *Manipulating Glass for Photonics*

Ted Sargent, University of Toronto, *Canada Solution-Processed Infrared Optoelectronic Devices Based on Colloidal Quantum Dots*

Akihiko Yoshikawa, Chiba Univrsity, Japan, *Novel InN/GaN MQW Visible-Light-Emitters Consisting of One Monolayer-Thick InN Wells Inserted in GaN Matrix*

Michael Brett, University of Alberta, Canada , *GLAD Thin Films: Optical Properties and Photonics Applications*

Himanshu Jain, Lehigh University, USA, *Speed of Photoinduced Phenomena in Chalcogenide Glasses*

Jean-Michel Nunzi, Queen's University, Canada, *Auger Fountain Electroluminescence in an Organic Diode*

Ben Eggleton, University of Sydney, Australia, *Highly Nonlinear Chalcogenide Glass Devices for Ultrafast All-Optical Signal Processing*

Kimberlay Hall, Dalhousie University, Halifax, Canada, *Femtosecond Optical Studies of Spintronic Materials*

Gerry Lucovsky, North Carolina State University, Raleigh, USA, *Microscopic Description of Strain-Reducing Chemical Bonding Self-Organizations in Chalcogenide and Oxide Non-Crystalline Alloys: Applications to Electronic and Optoelectronic Devices*

Keiji Tanaka, A. Saitoh and N. Terakado, Hokkaido University, Sapporo, Japan, *Anisotropic Photodeformation of Chalcogenide Glasses by Optical Pressure*

Ken Bosnick, National Institute for Nanotechnology, National Research Council of Canada, *Discrete Carbon Nanotube Diodes*

Edmund Linfield, University of Leeds, UK, *Recent Developments in Terahertz Quantum Cascade Lasers*

Kerry Vahala, California Institute of Technology, USA, *Cavity Opto-Mechanics: Mechanical Cooling and Amplification Using Radiation Pressure*

Maria Mitkova, Boise State University, Idaho, USA, *Photoinduced Diffusion in Tetrahedrally Coordinated Chalcogenide Glasses*

Animesh Jha University of Leeds, UK, *Novel Single and Multi-Core IR Fibres for near and mid-IR Lasers and Amplifiers*

Shanhui Fan, Stanford University, USA, *Dynamic and Non-Reciprocal Effects in Nanophotonics*

Jonathan Knight, University of Bath, England, *How to Do New Things with Tiny Pieces of Glass: Nonlinear Optics in Photonic Crystal Fibers*

Thomas Krauss, University of St. Andrews, Scotland, UK, *Slow Light in Silicon*

Giancarlo Righini, CNR Department of Materials and Devices, Roma, Italy, *Photonic Properties and Applications of Glass Micro- and Nanospheres*

Michael Blair, Ross Muenchausen, Luiz Jacobsohn, Bryan Bennett, Los Alamos National Laboratory, Los Alamos, USA, *Luminescence and Structural Properties of Nanophosphors*

Kaori Fukunaga, NICT, Tokyo, Japan, *Terahertz Spectroscopy and Imaging Techniques for Non-Invasive Material Analysis*

Mahi Singh, University Western Ontario, Canada, *All-Photonic Switching In Nanophotonic Quantum Wells*

Tom Tiedje, University British Columbia, Canada, *Growth and Properties of Gallium Arsenide Bismide, a New Long Wavelength Semiconductor Alloy*

David Mills, Queen Mary University of London, *Integrated Optics Devices for Biosensing Applications*

John Ballato, Clemson University, USA, *Novel Light Emitting Nanoparticles and Nanocomposites*

VENUE

University of Alberta Lister Conference Center

CONFERENCE CONTACTS

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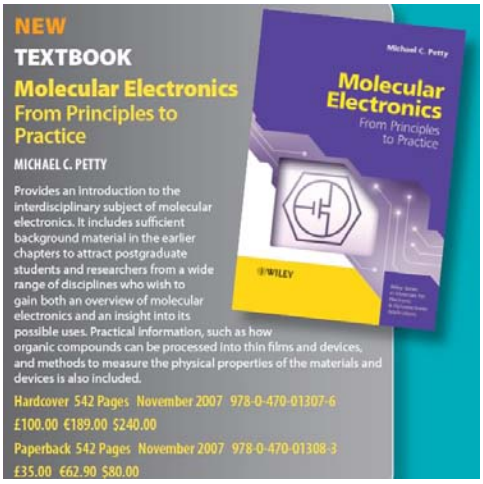

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