ISCOM07

International School and Conference on Optics and Optical Materials

3-7 September 2007
Belgrade, Serbia

ABSTRACTS OF PLENARY AND INVITED
LECTURES AND
CONTRIBUTED PAPERS

Editors
Brana Jelenković, Slobodan Vuković, Aleksandra Strinić

Institute of Physics
Belgrade, Serbia

Belgrade, 2007

BOOK OF ABSTRACTS

ABSTRACTS OF PLENARY AND INVITED LECTURES AND CONTRIBUTED PAPERS
of the
International School and Conference on Optics and Optical Materials **ISCOM07**

3-7 September 2007
Belgrade, Serbia

Editors

Brana Jelenković
Slobodan Vuković
Aleksandra Strinić

Computer processing

Aleksandra Strinić, Zoran Grujić

Publisher

Institute of Physics
Pregrevica 118, P.O. Box 68
11080 Belgrade, Serbia

Printed by

CENTURIO d.o.o.
Hilandarska 22, Belgrade

Number of copies

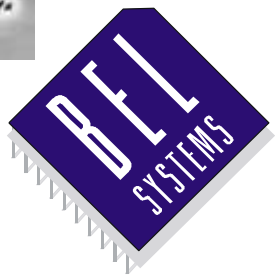
200

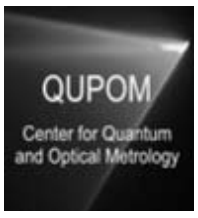
ISBN 978-86-82441-20-5

The ISCOM07 (International School and Conference on Optics and Optical Materials) has been approved by the European Physical Society (EPS). The Conference was organized by the Institute of Physics, University of Belgrade (www.phy.bg.ac.yu), Faculty of Physics, University of Belgrade (www.ff.bg.ac.yu), "Vinča" Institute of Nuclear Sciences, University of Belgrade (www.vin.bg.ac.yu) and Faculty of Electrical Engineering, University of Belgrade (www.etf.bg.ac.yu), under the auspices and with support of the **Ministry of Science, Republic Serbia**.

The support of the sponsors of the Conference is greatfully acknowledged:

1. Privredno društvo za distribuciju električne energije **Elektrodistribucija Beograd d.o.o.**
2. Privredno društvo za proizvodnju, preradu i transport uglja **RUDARSKI BASEN «KOLUBARA» d.o.o. LAZAREVAC**
3. **Bel Systems d.o.o.** Skenderbegova 11a, Beograd
4. **Kryooprema d.o.o.** Utve zlatokrile 9, 26000 Pančevo
5. **Advanced Research Systems, Inc**. www.arscryo.com
6. **European Physical Society**
7. **FP6 project OPSA number 026283**
8. **FP6 INCO project QUPOM number 026322**





Scientific Committee

Milivoj Belić, Qatar
Ian Bennion, United Kingdom
Hans I. Bjelkhagen, United Kingdom
Nikola Burić, Serbia
Stefka Cartaleva, Bulgaria
Arlene D. Wilson-Gordon, Israel
Paul Harrison, United Kingdom
Ljupčo Hadžievski, Serbia
Kurt Hingerl, Austria
Brana Jelenković, Serbia
Nikola Konjević, Serbia
Gaetano Mileti, Switzerland
Dejan Milošević, Bosnia and Herzegovina
Marina Popova, Russia
Zoran Popović, Serbia
Jelena Radovanović, Serbia
Vladimir Škarka, France
Laurentius Windholz, Austria

Organizing Committee

Brana Jelenković (Chair)
Zoran Popović
Dejan Pantelić
Radoš Gajić
Slobodan Vuković
Aleksandra Strinić (Secretary)
Mirjana Popović-Božić
Milorad Kuraica
Jelena Radovanović
Jovan Elazar
Ljupčo Hadžievski
Zoran Grujić

Conference topics

1. Quantum and Atomic optics
2. Linear and nonlinear optics
3. Optical materials (nanostructures, fibers and waveguides)
4. Meta materials and photonic crystals
5. Holography
6. Optical metrology
7. Bio-optics
8. Optoelectronics and Optical communications

Preface

This book contains contributions to the first International school and conference on optics and optical materials, ISCOM. The meeting features plenary and invited lectures and poster sessions. Program of the meeting provides tutorials to the benefits of students and young researches. Ten plenary speakers will give lectures in quantum optics, nonlinear optics, optical materials and holography. Program also provides most resent results in several topics covered by this meeting. They will be presented by twenty invited lectures during afternoon sessions by scientists working in different but related fields of optics. There are two poster sessions, late afternoon on Tuesday and Thursday, where students and young researchers had opportunity to present their latest results.

ISCOM has been organized by Institute of Physics, Faculty of physics, VINCA Institute of nuclear sciences, and Faculty of Electrical Engineering, all members of the University of Belgrade. Organizers hope that ISCOM will promote and disseminate knowledge of modern and multidisciplinary filed of optics, optical materials, and biophysics among researchers, particularly those working in our region. If the first ISCOM fulfills organizer's expectations there will be ISCOM 09.

August 2007

Brana Jelenković
ISCOM Organizing Committee

Table of Contents

Plenary and Invited lectures

Contributed papers

Poster session TUESDAY

Topic: Quantum and Atomic optics

Topic: Holography

Topic: Optical metrology

Topic: Bio-optics

Poster session THURSDAY

Topic: Linear and nonlinear optics

Topic: Optical materials (nanostructures, fibers and waveguides)

Topic: Meta materials and photonic crystals

Topic: Optoelectronics and Optical communication