Final Call for Papers

30 June – 4 July 2014, St. Petersburg, Russia
The conference will take place 30 June – 4 July 2014 in St.Petersburg, Russia, at the Holiday Inn St. Petersburg - Moskovskye Vorota Hotel.

The scope of LO’2014 covers all aspects of laser physics and engineering including:

- Solid State Laser Systems
- Free-space Optical Communications
- High-Field Laser Physics
- Nanophotonics and Biophotonics
- Nonlinear Photonics and Metamaterials
- Laser Beam Control
- Semiconductor Lasers and Devices
- Lasers in Environmental Monitoring
- Microwave Photonics
- THz Sources
- High-Power Fiber Lasers
- Lasers in Medicine

English will be the official language of the Conference.

**ABSTRACT & SUMMARY DEADLINE**

**FEBRUARY 15, 2014**
The Conference is technically co-sponsored by

IEEE Photonics Society

and hosted by:

Fund for Laser Physics

St.Petersburg National Research University of Information Technologies, Mechanics and Optics (ITMO)

The Union of Industrialists and Entrepreneurs (Employers) of St. Petersburg

Vavilov State Optical Institute (SOI)

The Conference sponsored by:

IPG Photonics Corporation

Laser Association

Rozhdestvensky Optical Society

Russian Foundation for Basic Research
CONFERENCE HONORARY CHAIRS

Zhores I. Alferov
Russian Academy of Science, Russia

Artur A. Mak
Institute for Laser Physics of Vavilov SOI, Russia

Charles H. Townes
University of California, Berkeley, USA

CONFERENCE CHAIR

Andrey A. Mak
Institute for Laser Physics of Vavilov SOI, Russia

CONFERENCE VICE-CHAIR

Evgeny A. Viktorov
Institute for Laser Physics of Vavilov SOI, Russia

CONFERENCE DIRECTOR

Olga V. Khapova
Institute for Laser Physics of Vavilov SOI, Russia

ORGANIZING COMMITTEE

Vladimir M. Arpishkin
Rozhdestvensky Optical Society, Russia

Oleg D. Gavrilov
Institute for Laser Physics of Vavilov SOI, Russia

Ivan M. Kislyakov
Institute for Laser Physics of Vavilov SOI, Russia

Sergey A. Kozlov
St.Petersburg National Research University of ITMO, Russia

Roman F. Kurunov
Vavilov SOI, Russia

Sergey N. Leonov
Dom Programm Ltd., Russia

Sergey V. Popov
IPG Photonics (UK) Ltd., UK

Anatoly G. Purin
Vavilov SOI, Russia

Aleksey V. Sergeev
St. Petersburg State University, Russia

Lyudmila K. Sukhareva
Vavilov SOI, Russia
ADVISORY COMMITTEE

CHAIR

Vladimir N. Vasilev
St.Petersburg National Research University of ITMO, Russia

Sergey N. Bagayev
Institute of Laser Physics of SB RAS, Russia

Yuri V. Chugui
Technological Design Institute of Scientific Instrument Engineering of SB RAS, Russia

James Coleman
University of Texas at Dallas, USA

Valentin P. Gapontsev
IPG Photonics Corporation, USA

Sergey G. Garanin
Russian Federal Nuclear Center - The All-Russian Research Institute of Experimental Physics (RFNC - VNIIIEF), Russia

Aleksandr V. Gurov
Rostec State Corporation

Aleksandr A. Kaplyanskii
Ioffe Physical-Technical Institute of RAS, Russia

Ivan B. Kovsh
Laser Association, Russia

Mikhail A. Lobin
The Union of Industrialists and Entrepreneurs of St. Petersburg, Russia

John Marsh
University of Glasgow, UK

Gennadiy A. Mesyats
Lebedev Physical Institute of RAS, Russia

Vladislav Ya. Panchenko
Russian Foundation for Basic Research, Russia

Vladimir P. Savchenko
JSC «Academician A.L.Mints Radiotechnical Institute», Russia

Ivan A. Shcherbakov
Prokhorov General Physics Institute of RAS, Russia

St.Petersburg, Russia
PROGRAM COMMITTEE

CHAIR

Nikolay N. Rosanov
Institute for Laser Physics of Vavilov SOI, Russia

VICE-CHAIRS

Alexandr A. Andreev
Institute for Laser Physics of Vavilov SOI, Russia

Richard M. De La Rue
University of Glasgow, UK

Vladimir Yu. Venediktov
Institute for Laser Physics of Vavilov SOI, Russia

SECRETARY

Anastasiya A. Mirzaeva
Institute for Laser Physics of Vavilov SOI, Russia

CONTACT INFORMATION FOR LO’2014

Fund for Laser Physics
199053, Kadetskaya linia, 5/2, St. Petersburg, Russia
Phone: +7 (812) 3236348
Fax: +7 (812) 3231783
E-mail: conference2014@laseroptics.ru
Site: http://www.laseroptics.ru
TECHNICAL PROGRAM
The LO’2014 technical program includes selected topic symposia, plenary, parallel and poster sessions over five days. Distinguished plenary and invited speakers will present the state-of-the-art of laser physics, photonics and optical engineering.

PUBLICATIONS
One page summaries, as submitted by the authors, of all accepted peer-reviewed papers will be included in the Technical Digest DVD-ROM distributed at the Conference.

ABSTRACT & SUMMARY DEADLINE
FEBRUARY 15, 2014
Prepare your submission using the provided templates, and follow the instructions at http://www.laseroptics.ru.

REGISTRATION FEES
The registration fee for Laser Optics 2014 includes admission to the technical sessions, exhibit, the conference reception, transportation from and to Pulkovo Airport and one copy of the Conference Program and Technical Digest on DVD–ROM.

Full Conference Registration € 500
(€ 400, if paid before April 30, 2014)
Student Registration € 150
(€ 100, if paid before April 30, 2014)
One–day Conference Registration € 300
Accompanying person € 100

HOUSING
Laser Optics will take place in the Holiday Inn St. Petersburg-Moskovskye Vorota hotel.

Holiday Inn Moskovskye Vorota is conveniently located two steps away from the metro station and only three bus stops from the very center of St. Petersburg.

We urge you to book your room well ahead of time and benefit from the Conference Low Rates.

Contact us for the conference low rates. Registraton and Hotel Reservations open in early December 2013.

DEADLINE FOR HOUSING RESERVATION
FEBRUARY 15, 2014
TOPICS FOR LO’2014

Solid-State Lasers for System Applications
Diode pumped solid state lasers • Free-space optical communication links • Linewidth reduction • Amplitude and frequency stabilization • Eye-safe lasers • Beam quality characterization • Frequency-comb generation • Novel laser materials

High Power Laser Systems and Facilities
Advances in high-power gas and solid-state lasers • Fundamental issues in high-power laser science • High power laser architectures • Terawatt lasers, including fusion lasers • Novel optical materials for high power applications and systems • Thermal and thermo-optical effects in lasers and their mitigation • CO2/CO lasers • Iodine lasers • Slab gas lasers • Chemical lasers • Excimer lasers • Extreme-UV light sources • Alkali vapor lasers

Semiconductor Lasers, Materials and Applications
Quantum-well, wire, dash and dot lasers and devices • MID-IR and Quantum Cascade lasers • Ultrashort pulse lasers • VCSELs, VECSELs and superlattice structures • UV and Visible diode lasers and LEDs • Compact THz sources and applications • Silicon photonics • Optical coherent tomography • Multiphoton imaging • Novel semiconductor-based devices and emerging applications

Laser Beam Control
Wavefront correction • Adaptive optics • Phase conjugation • Dynamic holography • Laser cavities • Stabilization and control of laser beam direction • Laser imaging • Coherent and non-coherent summation of laser beams • Singular laser optics

Super-Intense Light Fields and Ultra-Fast Processes
Generation of high-power, super short pulses • Atto-physics, ELI-project presentation • Problems of «Fast Ignition» for the ICF • Laser plasma X-ray sources • Fast particle generation and acceleration by laser pulses • Femtosecond laser technology and applications • Physics of ultrafast phenomena • Ultrafast devices and measurements

Nanophotonics and Biophotonics
Nonlinear optics of nanostructures • Spectroscopy of nanostructures • Optical power limiting • Photonic crystals • Nanoplasmonics • Nanostructures for solar energy utilization • Photodynamic processes in biology and nanophotonics • Nanoimaging and bioimaging

Lasers in Environmental Monitoring
Laser remote sensing technologies and methods • Lidar techniques and measurements for atmospheric remote sensing • Oil spill and ocean monitoring • Urban remote sensing • Laser sensing for geology • Remote sensing for agriculture and ecosystems • Space-based lidar for global observations
Nonlinear Photonics: Fundamentals and Applications
Nonlinear optical devices • Tunable, active, and nonlinear optical metamaterials • Conservative and dissipative optical solitons • Supercontinuum generation • Fiber optics and telecommunications

Microwave photonics (MWP)
High-speed and/or broadband microwave photonic devices • Integration technologies for microwave photonic devices • Optical analog-to-digital converters • Optical probing and sensing of microwave properties • Optical generation of RF, microwave, millimeter-wave and THz waves and optoelectronic oscillators • 2D stadium-shaped and 3D dielectric cavities for microlaser application

7TH INTERNATIONAL SYMPOSIUM ON HIGH-POWER FIBER LASERS AND THEIR APPLICATIONS
High power fiber lasers for material processing applications • Cutting and welding with kW fiber lasers • Fiber laser cladding, sintering and heat treatment • Fiber lasers for automotive applications • Mid power fiber laser applications • Pipe and thick section welding • Marking and engraving • Mid infra-red, 2 to 3 micron fiber lasers, processing including cutting and welding of plastics • visible, UV and ultrafast fiber lasers and applications • Life sciences, medical, surgical, food production, agricultural pest and herbal control applications of fiber lasers

3RD INTERNATIONAL SYMPOSIUM ON LASERS IN MEDICINE
Advanced Laser Systems for Medicine and Clinical Laser Applications • Optical Biomedical Diagnostics • Laser Tissue Interaction

7TH INTERNATIONAL CONFERENCE ON LASER OPTICS FOR YOUNG SCIENTISTS (LOY’S2014)

DESKTOP EXHIBITION
The Exhibition will be an integral part of the Conference Program with top institutions and companies representing the markets in lasers and optoelectronics.

Please contact us olgakhapova@gmail.com now in order to get details of the Exhibition and to complete the Exhibition contract.
TOPICAL COMMITTEES

Solid-State Lasers for System Applications
Co-chairs:
V.M. Polyakov, Inst. for Laser Physics of Vavilov SOI, Russia
L.N. Soms, Inst. for Laser Physics of Vavilov SOI, Russia

High Power Laser Systems and Facilities
Co-chairs:
O.B. Danilov, Inst. for Laser Physics of Vavilov SOI, Russia
A.A. Ionin, Lebedev Physical Inst. of RAS, Russia
Ja. Kodymova, Inst. of Physics, Czech Republic
S.A. Sukharev, Russian Federal Nuclear Center-VNIIEF, Russia
V.E. Yashin, Vavilov SOI, Russia

Semiconductor Lasers, Materials and Applications
Co-chairs:
G. Huyet, Tyndall National Inst. and Cork Inst. of Techn., Ireland
E.U. Rafailov, Univ. of Dundee, UK
G.S. Sokolovskii, Ioffe Physical-Technical Inst. of RAS, Russia

Laser Beam Control
Co-chairs:
V.P. Lukin, Inst. of Atmospheric Optics of SB RAS, Russia
M.S. Soskin, Inst. of Physics of NAS, Ukraine
V.Yu. Venediktov, Inst. for Laser Physics of Vavilov SOI, Russia

Super-Intense Light Fields and Ultra-Fast Processes
Co-chairs:
A.A. Andreev, Inst. for Laser Physics of Vavilov SOI, Russia
P. McKenna, Univ. of Strathclyde, UK
A.M. Sergeev, Inst. of Applied Physics of RAS, Russia

Nanophotonics and Biophotonics
Co-chairs:
S.M. Bachilo, Rice Univ., USA
I.M. Belousova, Inst. for Laser Physics of Vavilov SOI, Russia
W.J. Blau, Trinity College Dublin, Ireland
E.A. Katz, Ben-Gurion Univ. of the Negev, Israel
A.A. Krasnovsky Jr, Bach Inst. of Biochemistry of RAS, Russia
D.V.G.L.N. Rao, Univ. of Massachusetts Boston, USA

Lasers in Environmental Monitoring
Co-chairs:
A.W. Mantz, Connecticut College, USA
A.I. Nadezhdinsky, Prokhorov General Physics Inst. of RAS, Russia
M.W. Sigrist, ETH Zurich Inst. of Quantum Electronics, Switzerland
A.P. Zhevlakov, Inst. for Laser Physics of Vavilov SOI, Russia
Nonlinear Photonics: Fundamentals and Applications
Co-chairs:
Yu.S. Kivshar, Australian National Univ., Australia; St.Petersburg National Research Univ. of ITMO, Russia
N.N. Rosanov, Inst. for Laser Physics of Vavilov SOI, Russia
S.K. Turitsyn, Aston Univ., UK

Microwave photonics (MWP)
Co-chairs:
I.Yu. Denisyuk, St.Petersburg National Research Univ. of ITMO, Russia
A.I. Kurapov, Radio Technical Inst. Ltd., Russia
I. Ledoux-Rak, Inst. d’Alembert - Ecole Normale Superieure de Cachan, France

7TH INTERNATIONAL SYMPOSIUM ON HIGH-POWER FIBER LASERS AND THEIR APPLICATIONS
Chair:
V.P. Gapontsev, IPG Photonics Corp., USA
Vice-chair:
S.V. Popov, IPG Photonics (UK) Ltd., UK

3ND INTERNATIONAL SYMPOSIUM ON LASERS IN MEDICINE
Co-chairs:
I.A. Shcherbakov, Prokhorov General Physics Inst. of RAS, Russia
R. Sroka, Laser Research Center, Munich Univ. Clinic, Germany

7TH INTERNATIONAL CONFERENCE ON LASER OPTICS FOR YOUNG SCIENTISTS (LOYS’2014)
Co-chairs:
S.A. Kozlov, St.Petersburg National Research Univ. of ITMO, Russia
V.A. Makarov, Lomonosov Moscow State Univ., Russia
INVITED TALKS

PLENARY SESSION

Yu.S. Kivshar, Australian National Univ., Australia; St.Petersburg National Research Univ. of ITMO, Russia
All-dielectric nanophotonics: from magnetic light to Fano-metasurfaces.

O.N. Krokhin, Lebedev Physical Inst. of RAS, Russia.
Interference of single photons.

A.M. Zheltikov, Lomonosov Moscow State Univ., Russia
The serendipity of ultrashort guided lightwaves: from quantum physics to life sciences.

SOLID-STATE LASERS FOR SYSTEM APPLICATIONS

A. Arie, Tel-Aviv Univ., Israel
Adiabatic frequency conversion.

A.F. Kornev, Vavilov State Optical Inst., Russia
KW-level Q-switched Nd:YAG MOPA lasers.

A.M. Negriyko, V.I. Bezrodnii, Inst. of Physics of NAS, Ukraine
Solid-state lasers elements based on dye doped polyurethane.

HIGH POWER LASER SYSTEMS AND FACILITIES

S.A. Bel’kov, Russian Federal Nuclear Center – VNIIEF, Russia
UFL 2M Facility: state of the art.

G.H. Kim, J.H. Yang, S.A. Chizov, A.V. Kulik, E.G. Sall, V.E. Yashin, U. Kang, RSS, KERI, Republic of Korea
High peak and high average power Yb:KGW laser systems for industrial applications.

S.Yu. Mironov, Inst. of Applied Physics of RAS, Russia
Laser system for generation 3D ellipsoidal UV pulses for DESY photoinjector.

I.B. Mukhin, Inst. of Applied Physics of RAS, Russia
High repetition rate cryogenic disk laser for OPCPA applications.

O.V. Palashov, Inst. of Applied Physics of RAS, Russia
Faraday isolators for high (> 1kW) average power lasers.

A.A. Shaykin, Inst. of Applied Physics of RAS, Russia
Spatio-temporal pulse shaping in the high energy and high efficiency laser amplifiers.

B.V. Zhdanov, US Air Force Academy, USA
Alkali vapor lasers: history, current state and perspectives.
SEMICONDUCTOR LASERS, MATERIALS AND APPLICATIONS

L. Asryan, Virginia Polytechnic Inst. and State Univ., USA
Intradot relaxation and the modulation bandwidth in quantum dot lasers.

R. Hogg, Univ. of Sheffield, UK
All-semiconductor photonic crystal lasers.

S.V. Ivanov*, S.V. Sorokin*, and E.V. Lutsenko**, *Ioffe Physico-Technical Inst. of RAS, Russia, **Stepanov Inst. of Physics, Belarus
II-VI/III-N based micro-chip green-yellow laser convertors.

Th.F. Krauss, Univ. of York, UK
Integrated nonlinear functionality based on slow light photonic crystal waveguides.

F. Laurell, KTH Royal Inst. of Technology, Sweden
Nonlinear optics with diode lasers.

G. Malcolm, M2 Ltd, UK
Novel narrow linewidth and ultrafast solid-state and semiconductor disk lasers.

B. Resan, Time-Bandwidth Products, Switzerland
High pulse repetition rate lasers modelocked with quantum dot SESAMs.

A. Rode, Australian National Univ., Australia
Structural modification of silicon induced by fs-laser microexplosion.

T. Südmeyer, S. Schilt, and M. Hoffmann, Univ. de Neuchâtel, Switzerland
Using SESAMs as fast opto-optical modulators for low-noise CEO stabilization of ultrafast lasers.

M. Vitiello, Scuola Normale Superiore, Italy
Engineering quantum cascade lasers as a low divergence and narrow-linewidth source across the far-infrared.

LASER BEAM CONTROL

P. Artal, Univ. de Murcia, Inst. Univ. de investigación en Óptica y Nanofisica, Spain
Adaptive optics: the future of visual testing.

S. Bonora, Inst. of Nanotechnologies and Photonics, Italy
Adaptive optics for pulse shaping and image optimization.

A. Forbes, CSIR - National Laser Centre, Republic of South Africa
The digital laser.

Yu.E. Geints, A.A. Zemlyanov, E.K. Panina, Zuev Inst. of Atmospheric Optics of SB RAS, Russia
Photonic nanojets from microspheres: a step to superbocusing of light.
C. Reinlein, Fraunhofer-Inst. für Angewandte Optik und Feinmechanik, Germany
Topic to be announced.

P. Villoresi, Univ. of Padua, Italy
Turbulence as a resource in quantum communications.

L.P. Yatsenko, Inst. of Physics of NAS, Ukraine
Recent progress in frequency shifted feedback lasers and applications.

SUPER-INTENSE LIGHT FIELDS AND ULTRA-FAST PROCESSES

N. Andreev, Inst. of High Temperature of RAS, Russia
Laser wakefield electron acceleration to multi-GeV energies in guiding structures.

S.V. Bulanov, JAERI, Japan
Laser ion acceleration for hadron therapy.

Chang Hee Nam, GIST, Republic of Korea
Laser particle acceleration at relativistic laser intensity.

H. Fiedorowicz, Woen. Akad. Techn., Poland
Laser plasma sources of soft X-rays and extreme ultraviolet (EUV) for application in science and technology.

M. Kalashnikov, MBI, Germany
ELI-ALPS - unique European laser facility.

P. McKenna, Univ. of Strathclyde, UK
Ultraintense laser-plasma interactions in the relativistic transparency regime.

V. Malka, LOA, France
Research and innovation in laser plasma accelerator physics.

M. Murakami, Osaka Univ., Japan
Proton acceleration by nanotube accelerator.

V. Tikhonchuk, CELIA, France
Target charging and electromagnetic field emission in the short pulse laser-plasma experiments.

NANOPHOTONICS AND BIOPHOTONICS

S.M. Bachilo, Rice Univ., USA
Laser spectroscopy of nanoparticles: utilizing discreteness of single-walled carbon nanotubes in their study.

W.J. Blau, Trinity College Dublin, Ireland
Nanocarbon photonics - an exciting and versatile new photonic materials platform.

G. Ferrini, Univ. Cattolica del Sacro Cuore, Italy
A multimodal approach to time-resolved optical spectroscopy for biomolecular detection.
D.J. Hagan, Univ. of Central Florida, USA
Extremely nondegenerate nonlinear optics for mid-IR detection and lasing.

E.A. Katz, Ben-Gurion Univ. of the Negev, Israel
Angle restriction of photon emission for ultraefficient photovoltaics: experimental proof of concept.

I.M. Kislyakov, I.M. Belousova, V.M. Kiselev, Vavilov SOI, Russia
Aggregated and functionalized nanocarbon for optical power limiting and singlet oxygen generation.

A.A. Krasnovsky, Bach Inst. of Biochemistry of RAS, Russia
Laser photochemistry of oxygen: application to studies of oxygen photonics.

N.V. Nikonorov, St.Petersburg National Research Univ. of ITMO, Russia
Development of new photonic and plasmonic devices based on nanostructured glasses and glassceramics.

*Inst. d’Electronique Fondamentale, Univ. Paris Sud, France; **Univ. de Montréal, Canada
Carbon nanotubes photonics: towards integrated laser.

E.D. Obraztsova, Prokhorov General Physics Inst. of RAS, Russia
Linear and non-linear optical properties of filled carbon nanotubes.

D.V.G.L.N. Rao, Univ. of Massachusetts Boston, USA
Nonlinear optics of some nontoxic nanomaterials.

N.N. Rozhkova, Karelian Research Center of RAS, Russia
Hybrid structures of shungite nanocarbon.

T.A. Vartanyan, A.O. Orlova, St.Petersburg National Research Univ. of ITMO, Russia
Optics of thin composite films: plasmon enhanced resonance response or coupling induced shift of the plasmon band?

Ju. Wang, Shanghai Inst. of Optics and Fine Mechanics CAS, PRC
Nonlinear absorption and nonlinear refraction of two-dimensional transition metal dichalcogenides.

LASERS IN ENVIRONMENTAL MONITORING

A.F. Bunkin, Prokhorov General Physics Inst. of RAS, Russia
Remote sensing of seawater and drifting ice by compact Raman lidar.

Ch. Janssen. UPMC Sorbonne Univ., France
High resolution laser absorption spectroscopy in the 10 micron window - from the lab to the atmosphere.

A.W. Mantz, Connecticut College, USA
High resolution spectra of molecules recorded at temperatures of interest (50K to 296K) for planetary atmospheres.
A.I. Nadezhdinsky, Prokhorov General Physics Inst. of RAS, Russia Tunable diode laser spectroscopy for environmental application.

S. Pershin, Prokhorov General Physics Inst. of RAS, Russia Lidar data over Mars surface by NASA mission Mars Polar Lander-99.


V.E. Privalov, St.Petersburg State Polytechnical Univ., Russia Laser remote sensing of radionuclides.

V.G. Shemanin, Novorossiysk Polytechnical Inst., Kuban State Technological Univ., Russia Laser sensing of aerosol flows.

NONLINEAR PHOTONICS: FUNDAMENTALS AND APPLICATIONS

K. Blow, Aston Univ., UK Parametric amplifiers in optical fibres.

A. Chipouline, Univ. of Jena, Germany Interaction of plasmonic nanostructures and quantum system: recent results.

C. Conti, Univ. di Roma La Sapienza, Italy Effect of nonlinearity on disorder induced localized state.

A. Desyatnikov, National Univ. Australia, Australia Dynamics of structured light in singular photonic lattices.

A. Fratalocci, King Abdullah Univ. of Science and Technology, Saudi Arabia When disorder is just right: on complexity-driven photonics.

M. Kaurannen, Tampere Univ. of Technology, Finland Enhancement mechanisms for the nonlinear optical response of metal nanostructures.

M. Motzkus, Heidelberg University, Germany Quantum-control spectroscopy.

T. Murzina, Lomonosov Moscow State Univ., Russia Optical second harmonic generation from plasmonic meta-surfaces.

R. Schiek, Univ. of Jena, Germany Self-phase modulation in lithium niobate waveguides.

M. Sorokina, S. K. Turitsyn, Aston Univ., UK Nonlinear communication systems with capacity higher than linear additive white Gaussian noise channel.
A.P. Sukhorukov, Lomonosov Moscow State Univ., Russia
Nonlinear oscillations and waves in photonic crystals from a small number of elements.

A.A. Sukhorukov, Australian National Univ., Australia
Generation and manipulation of entangled photons in nonlinear waveguides.

M. Tlidi, Univ. Libre de Bruxelles, Belgium
Dynamics of localized structures under delayed optical feedback.

MICROWAVE PHOTONICS (MWP)

A.A. Ishchenko, Inst. of Organic Chemistry of NAS, Ukraine
Laser media based on polymethine dyes for visible and near IR range.

A. Lavrinenko, Technical Univ. of Denmark, Denmark
Linear and nonlinear THz spectroscopy of materials and metamaterials.

T. Timofeeva, New Mexico Highlands Univ., USA
New non-linear molecular crystals for photonics application.