

JOINT TECHNICAL PROGRAM

CAOL*2016

*7-th International Conference on
Advanced Optoelectronics and Lasers*

Accompanying events

LFNM*2016

*13-th International Conference on Laser and
Fiber-Optical Networks Modeling*

*IEEE Photonics Society
IEEE Photonics Society Ukraine Chapter
University of Guanajuato, Mexico
V.N. Karazin Kharkiv National University, Ukraine
I.I.Mechnikov Odessa National University, Ukraine
Institute of Physics, National Academy of Sciences of Ukraine
Kharkiv National University of Radio Electronics, Ukraine
Ministry of Education and Science of Ukraine*

Odessa, Ukraine
September 12 – 15, 2016

JOINT TECHNICAL PROGRAM

International CONFERENCE on ADVANCED OPTOELECTRONICS and LASERS, CAOL*2016
International Conference on LASER and FIBER-OPTICAL NETWORKS MODELING, LFNM*2016

September 12 – 15, 2016

Odessa, Ukraine

www.caolconference.org

Sunday, September 11, 2016

09:00 - 19:00 Registration and Accommodation

Monday, September 12, 2016

09:00 - 19:00 Registration and Accommodation

09:15 – 09:30 Conference Opening

Chair: Valentin Smyntyna, Odessa I. I. Mechnikov National University, Ukraine

09:30 – 11:30 CAOL Plenary I

Chair: Valentin Smyntyna, Odessa I. I. Mechnikov National University, Ukraine

09:30 - 10:00 (Invited)

Miguel Andrés (Universidad de Valencia, Spain)

Broadband Tuning of Four-Wave Mixing Bands Using Photonic Crystal Fiber

10:00 - 10:30 (Invited)

Gianluca Ruffato (University of Padova, Italy)

Diffraction optics for OAM-mode division multiplexing of optical vortices

10:30 - 11:00 (Invited)

Andrei Lavrinenko (Technical University of Denmark, Denmark)

Nonlinear propagation of surface plasmon-polaritons in gold stripe waveguides

11:00 - 11:30 (Invited)

Konstantin Bliokh (CEMS, RIKEN, Japan)

Extraordinary momentum and spin in structured light

11:30 – 12:00 Coffee/Tee Break

12:00 – 13:30

Laser Physics

Chair: Aleksandr Bekshaev, I. I. Mechnikov Odessa National University, Ukraine

12:00 - 12:15

Nuran Dogru (University of Gaziantep, Turkey)

RIN of Hybrid Soliton Pulse Source with Sinusoidally Chirped Grating

12:15 - 12:30

Aleksej Kapustnik (Institute for Single Crystals, National Academy of Sciences, Ukraine)

Growth and characterization of $Cd_{1-x}Mn_xTe:Fe^{2+}$ crystals - active material for Mid IR laser

12:30 - 12:45

Tamara Bezrodna (Institute of Physics, National Academy of Sciences, Ukraine)

Spectral and photophysical properties of phenalenone dyes in polyurethane polymers of different polarity

12:45 - 13:00

Rohan Bajaj (Gautam Buddha University, Greater Noida, India)

Design and Performance Analysis of different sized VCSEL operating at 1160nm wavelength for Optical Interconnect

13:00 - 13:15

Andrii Sukhariev (Taras Shevchenko National University of Kyiv, Ukraine)

Theoretical review of integrated SRS-RL process in multiple scattering media

12:00 – 13:30

Nanophotonics

Chair: Alexander Nosich, O. Ya. Usikov Institute for Radiophysics and Electronics, National Academy of Sciences, Kharkiv, Ukraine

12:00 - 12:15

Eugene Odarenko (Kharkiv National University of Radio Electronics, Ukraine)

Dispersion Properties of a One-dimensional Anisotropic Magnetophotonic Crystal with a Gyrotropic Layer

12:15 - 12:30

Igor Lyubchanskii (Donetsk Physical and Technical Institute, National Academy of Sciences, Ukraine)

Magneto-optic waveguide and dielectric photonic crystal as a new complex structure for photonic

12:30 - 12:45

Sergey Nedukh (O. Ya. Usikov Institute for Radiophysics and Electronics, National Academy of Sciences, Ukraine)

Planar microwave metamaterials: Design and prospective application

12:45 - 13:00

Sergii Gryshchenko (Samsung Electronics R&D, Kyiv, Ukraine)

Optical spectral characteristics of resonant cavity photodetector

13:00 - 13:15

Yuri Pilgun (Taras Shevchenko National University of Kyiv, Ukraine)

Plane-wave expansion based modelling of laser beam propagation in anisotropic medium

13:30 – 15:00 Lunch Break

15:00 – 17:00 CAOL Plenary II

Chair: Miguel Andrés, *Universitat de Valencia, Spain*

15:00 - 15:30 (Invited)

Kestutis Staliunas (*Universitat Politecnica Catalunya, Spain*)
Photonic Crystal Microchip Laser

15:30 - 16:00 (Invited)

Richard De La Rue (*University of Glasgow, United Kingdom*)
Slow and Fast Graphene Oxide Photonics

16:00 - 16:30 (Invited)

Mikhail Vasnetsov (*Institute of Physics, National Academy of Sciences, Ukraine*)
Linear and Nonlinear Optics of Synthetic Opal

16:30 - 17:00 (Invited)

Grigori Sokolovskii (*Ioffe Physical-Technical Institute, Russian Academy of Sciences, Russia*)
Visible from Invisible: Second harmonic generation with infrared laser diodes

17:00 – 18:30 Poster Session I

18:30 Welcome Event

Tuesday, September 13, 2016

09:30 – 11:00 CAOL/LFNM Plenary I

Chair: Andrei Lavrinenko (*Technical University of Denmark, Denmark*)

09:30 - 10:00 (Invited)

Sergey Prosvirnin (*Institute of Radio Astronomy, National Academy of Sciences, Ukraine*)
Controllable graphene reflect array

10:00 - 10:30 (Invited)

Mauro Pereira (*University of Sheffield, United Kingdom*)
TERA-MIR Radiation: Materials, Generation, Detection and Applications

10:30 - 11:00 (Invited)

Leonid Yatsenko (*Institute of Physics, National Academy of Sciences, Ukraine*)
Stimulated Raman adiabatic passage (STIRAP) in physics, chemistry and technology: current status and future directions

11:00 – 11:30 Coffee/Tee Break

11:30 - 13:15

Laser & Resonators

Chair: Alexis Kudryashov, *Active Optics NightN Ltd, Russia*

11:30 - 11:45

Volodymyr Bezrodnyi (*Institute of Physics, NAS, Ukraine*)
Passive Q-switching of Nd:YAG lasers by dye-doped polyurethane-based elements

11:45 - 12:00

Mendykhan Khassenov (*Nazarbayev University, Kazakhstan*)
Luminescence spectra of active media of lasers on visible and near infrared transitions of inert gases under ion beam excitation

12:00 - 12:15

Alexander Volodenkov (*Grodno State University, Belarus*)
Method of Modeling of XeCl excilamps with capacitance discharge in frequency regime of work

12:15 - 12:30

Sergiy Steshenko (*O. Ya. Usikov Institute for Radiophysics and Electronics, National Academy of Sciences, Ukraine*)
Mode Selective Properties of Concentric Metal Rings on a Dielectric Substrate in a Circular Waveguide

12:30 - 12:45

Daria Titova (*Southern Federal University, Russia*)
Excitation of a Rotating Metal Wall Dielectric Resonator and its Rotation Rate Measurement

12:45 - 13:00

Igor Matsnev (*Institute for Physics, National Academy of Sciences, Ukraine*)
Controlled optical feedback in external cavity diode laser with volume holographic grating

13:00 - 13:15

Alexis Kudryashov (*Active Optics NightN Ltd, Russia*)
Atmospheric turbulence modeling by means of deformable mirrors with the use of phase interpolation

11:30 - 13:00

Plasmonics & Nanophotonics

Chair: Sergii Prosvirnin, *Institute of Radio Astronomy of the National Academy of Sciences, Kharkiv, Ukraine*

11:30 - 11:45

Nadiia Stognii (*Kharkiv National University of Radio Electronics, Ukraine*)
Excitation of Plasmon Resonances on Nanowire and Nanoshell by Complex Source Point

11:45 - 12:00

Denis Natarov (*O. Ya. Usikov Institute for Radiophysics and Electronics, National Academy of Sciences, Ukraine*)
Electromagnetic Analysis of a Silver Nanotube Laser with Active Regions

12:00 - 12:15

Tatiana Smirnova (*Institute of Physics, National Academy of Sciences, Ukraine*)
The effect of plasmonic nanocomposite structure on the dynamics of electron excitations by ultra-short laser pulses

12:15 - 12:30

Veliade Saliieva (*Kharkov National University of Radio Electronics, Ukraine*)
Optimization of the input edge geometry of 2-D photonic crystal waveguide

12:30 - 12:45

Oleksandr Donskov (*Kharkov National University of Radio Electronics, Ukraine*)
Investigation of the 2-D Photonic Crystal Demultiplexer

13:15 – 14:30 Lunch Break

14:30 - 16:30 CAOL/LFNM Plenary II
Chair: Konstantin Bliokh, CEMS, RIKEN, Japan

14:30 - 15:00 (Invited)

Alexander Nosich (*O. Ya. Usikov Institute for Radiophysics and Electronics, National Academy of Sciences, Ukraine*)
Essentials and Merits of the Method of Analytical Regularization in Computational Optics and Photonics

15:00 - 15:30 (Invited)

Marat Soskin (*Institute of Physics, National Academy of Sciences, Ukraine*)
Topology of singularities and umbilic points in dynamic random optical fields

15:30 - 16:00 (Invited)

Viktor Taranenko (*International center "Institute of Applied Optics", National Academy of Sciences, Ukraine*)
Rotating Full Poincaré Beams

16:00 - 16:30 (Invited)

Vladimir Volostnikov (*Lebedev Physical Institute, Russian Academy of Sciences, Samara Branch, Russia*)
Optical vortices: the past, the present and the future

17:00 Sightseeing Tour

Wednesday, September 14, 2016

09:00 - 11:00 CAOL/LFNM Plenary I

Chair: Marat Soskin, Institute of Physics, National Academy of Sciences, Ukraine

09:00 - 09:30 (Invited)

Aleksandr Bekshaev (*I. I. Mechnikov Odessa National University, Ukraine*)
Evolution of the phase singularities in edge-diffracted optical-vortex beams

09:30 - 10:00 (Invited)

Eugene Tikhonov (*Institute of Physics, National Academy of Sciences, Ukraine*)
Interferometry in reflected paraxial beams: measurement of light coherence and film optical parameters

10:00 - 10:30 (Invited)

Nugzar Gomidze (*Batumi Shota Rustaveli State University, Georgia*)
Stroboscopic Method of Fluorescence Analysis of Optically Solid Media

10:30 - 11:00 (Invited)

Inna Plastun (*Yu. A. Gagarin State Technical University of Saratov, Russia*)
Intermolecular association and new optical properties of DNA nucleic acid bases and nanodiamonds

11:00 - 11:30 Coffee/Tee Break

11:30 - 13:00

Optical Instrumentation & Characterization

Chair: Eugene Tikhonov, Institute of Physics, National Academy of Sciences, Ukraine

11:30 - 11:45

Alexis Kudryashov (*Active Optics NightN Ltd, Russia*)
New approaches of uniform focal spot formation by means of deformable mirror

11:45 - 12:00

Alexander Yu. Ivanov (*Grodno State University, Grodno, Belarus*)
Steam bubble evolution on laser treating of metals in liquids

12:00 - 12:15

Ilya Galaktionov (*Active Optics NightN Ltd, Russia*)
Efficiency of the wavefront correction of scattered radiation by means of bimorph mirror

12:15 - 12:30

Myhaylo Kotov (*Taras Shevchenko National University of Kyiv, Ukraine*)
Talbot wavefront sensor with the adaptive SLM grating

12:30 - 12:45

Oleg Sidoryuk (*M. F. Stelmah Research Institute "Polyus", Russia*)
Organosilicon vapor laser pyrolysis as the method of fine forming of optical surfaces

12:45 - 13:00

Xavier Roselló-Mechó (*Universidad de Valencia, Spain*)
A perturbative approach to the elasto-optic effect in optical fibers under axial strain

11:30 - 13:00

Light-Matter Interaction & Quantum Physics

Chair: Aleksandr Glova, SRC RF TRINITI, Moscow, Russia

11:30 - 11:45

Mykhailo Klymenko (*University of Liege, Belgium*)
Single-electron energy spectra of two coupled phosphorus donors in silicon

11:45 - 12:00

Stanislav Starodub (*Institute of Applied Physics, National Academy of Sciences, Ukraine*)
The superstrong repulsion of electrons in intense pulsed laser fields

12:00 - 12:15

Tetiana Bulavinets (*Lviv Polytechnic National University, Ukraine*)
Modeling absorption and scattering cross sections of the multilayer nanoshells in the near infrared spectrum region

12:15 - 12:30

Alexandr Lebed' (*Institute of Applied Physics, National Academy of Sciences, Ukraine*)
Resonant Laser-modified Electron-Electron Scattering by a Strong Bichromatic Pulsed Field

12:30 - 12:45

Volodymyr Byelobrov (*O. Ya. Usikov Institute for Radiophysics and Electronics, National Academy of Sciences, Ukraine*)
Asymptotical Approximation of Lasing Eigenvalues of Dielectric Grating of Infinite Circular Cylinders in a Free Space

12:45 - 13:00

Oleg Denisenko (*Institute of Applied Physics, National Academy of Sciences, Ukraine*)
Soft- and Hard- Photon Emission from Pair Annihilation in Laser Field

13:00 - 14:30 Lunch Break

14:30 - 16:30 CAOL/LFNM Plenary II

Chair: Mauro Pereira *Sheffield Hallam University, UK*

14:30 - 15:00 (Invited)

Aleksandr Glova (*SRC RF TRINITY, Russia*)

Remote processing of metals with an increased laser radiation intensity

15:00 - 15:30 (Invited)

Sergei Roshchupkin (*Institute of Applied Physics, National Academy of Sciences, Ukraine*)

Influence of strong pulsed laser fields at resonant and coherent quantum electrodynamics processes

15:30 - 16:00 (Invited)

Alexis Kudryashov (*Active Optics NightN Ltd, Russia*)

Doughnut and top-hat beam formation by means of bimorph deformable mirrors - problems and solutions

16:00 - 16:30 (Invited)

Bo Yong (*Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, PR China*)

High-power QCW microsecond-pulse sodium beacon laser with D2b re-pumping

16:30 - 18:00 Poster Session II

18:00 Gala Dinner

Thursday, September 15, 2016

09:30 - 11:00 CAOL/LFNM Plenary I

Chair: Gianluca Ruffato, *University of Padova, Italy*

09:30 - 10:00 (Invited)

Roberto Morandotti (*Institut National de la Recherche Scientifique-Centre Energie, Matériaux et Télécommunications (INRS-EMT), Université du Québec, Canada*)

Quantum state generation via integrated frequency combs

10:00 - 10:30 (Invited)

Anatoliy Ivanisik (*Taras Shevchenko National University of Kyiv, Ukraine*)

Peculiarity of nonlinear optical processes dynamics in Kerr liquids

10:30 - 11:00 (Invited)

Oleg Drobakhin (*Oles Honchar Dnipropetrovsk National University, Ukraine*)

Reflection of Chirped Gaussian Pulses from Non-periodic Bragg Layered Nanostructures

11:00 - 11:30 Coffee/Tee Break

11:30 - 13:15

Optical Instrumentation & Characterization

Chair: Vyacheslav Maslov, *V.N. Karazin Kharkov National University, Ukraine*

11:30 - 11:45

Alexander Nikitin (*Active Optics NightN Ltd, Russia*)

Hartmannometer - device to measure optical elements

11:45 - 12:00

Joanna Gumenjuk-Sichevska (*Lashkaryov Institute of Semiconductor Physics, National Academy of Sciences, Ukraine*)

Two-color Arrays for Sub-Terahertz/Infrared Imaging

12:00 - 12:15

Yuri Zavalov (*Institute on Laser and Information Technologies - Branch of the Federal Scientific Research Centre "Crystallography and Photonics", Russian Academy of Sciences, Russia*)

On-line diagnostics of the melt surface dynamics during layerwise melting of the metal powder

12:15 - 12:30

Alexander Ivanov (*Grodno State University, Grodno, Belarus*)

Diagnostics of crater evolution on laser plasma materials processing

12:30 - 12:45

Goorin Oleg (*I. Kozhedub Kharkiv Airforce University, Ukraine*)

Experimental research of dynamic spectral filtration using laser radiation interaction with multifrequency acoustic wave

12:45 - 13:00

Alexandr Ostroukh (*International center "Institute of Applied Optics", National Academy of Sciences, Ukraine*)

Method of synthesized phase objects for Fourier-Mellin invariant pattern recognition

11:30 - 13:00

Nonlinear Optics & Photonics

Chair: Vladimir Fesenko, *Institute of Radio Astronomy, National Academy of Sciences, Ukraine*

11:30 - 11:45

Gertruda Klimusheva (*Institute of Physics, National Academy of Sciences of Ukraine*)

Enhanced optical nonlinearity of the glassy composites based on the cobalt octanoate and noble metal nanoparticles at the off-resonance excitation

11:45 - 12:00

Elena Kostenyukova (*Institute for Single Crystals, National Academy of Sciences, Ukraine*)

Effect of L-arginine on the laser damage threshold and SHG efficiency of the KDP crystal

12:00 - 12:15

Ihor Virtt (*I. Franko Drohobych State Pedagogical University, Ukraine*)

Optical and nonlinear optical properties of thin ZnMnO films

12:15 - 12:30

Svitlana Bugaychuk (*Institute of Physics, National Academy of Sciences, Ukraine*)

Nonlinear-Optical Liquid Crystal Cells Based on Microstructured Substrate

12:30 - 12:45

Anatoliy Andrushchak (*Lviv Polytechnic National University, Ukraine*)

The Acousto-Optic Effect Maxima in SrB₄O₇ Crystal

12:45 - 13:00

Valentyn Lymar (*V. N. Karazin Kharkiv National University, Ukraine*)

Stimulated Doppler Effect on the Surface of a Gas Bubble Thermocapillary Trapped by a Laser in an Absorbing Liquid

13:00 - 14:30 Lunch Break

14:30 - 16:00 Light-Matter Interaction & Quantum Physics

Chair: Mykhailo Klymenko, University of Liege, Belgium

14:30 - 14:45

Vitalii Nedoresha (Institute of Applied Physics, National Academy of Sciences, Ukraine)
Resonant two-photon emission of electron in the pulsed laser field

14:45 - 15:00

Olha Kuryzheva (Kharkiv National University of Radio Electronics, Ukraine)
Evolution of an Airy pulse energy flow induced by a dielectric plane boundary

15:00 - 15:15

Elena Padusenko (Institute of Applied Physics, National Academy of Sciences, Ukraine)
Nonresonant electron-nucleus spontaneous bremsstrahlung in the field of two pulsed laser waves

15:15 - 15:30

Sergiy Lyagushyn (Oles Honchar Dnipro National University, Ukraine)
To the Problem of Field Macrostate Description and Investigation

15:30 - 15:45

Alexey Voroshilo (Institute of Applied Physics, National Academy of Sciences, Ukraine)
Resonant two-photon annihilation of electron-positron pair in the pulsed linear polarized wave field

16:00 Closing Ceremony

Poster Reports

Monday, September 12, 2016

16:30 – 18:00 Poster session I

Chair: Ievgen Brytavskiy, Odessa I. I. Mechnikov National University, Ukraine

- 1) **Iryna Yaremchuk** (Lviv Polytechnic National University, Ukraine)
Optimization metal-coated gratings for sensors applications
- 2) **Eugene Odarenko** (Kharkiv National University of Radio Electronics, Ukraine)
Photonic crystal and Bragg waveguides for THz electron devices
- 3) **Volodymyr Romakh** (Lviv Polytechnic National University, Ukraine)
Wave equation solution for multilayer planar waveguides in a spatial frequency domain
- 4) **Anatolii Lazarenko** (National Technical University "Kharkiv Polytechnic Institute", Ukraine)
Origin of life experiment enlightened by laser
- 5) **Vyacheslav Maslov** (O.Ya. Usikov Institute for Radiophysics and Electronics, NAS of Ukraine)
Specialities of Spectral-Fluorescent Behaviour of Some Red Laser Dyes in Annealed Silica Xerogel
- 6) **Vladimir Titar** (V. N. Karazin Kharkiv National University, Ukraine)
Application of lasers in ophthalmology
- 7) **Vladimir Titar** (V. N. Karazin Kharkiv National University, Ukraine)
Perception of electromagnetic waves visible to the human eye
- 8) **Alexander Levchenko** (V. N. Karazin Kharkiv National University, Ukraine)
Effect of low intensity laser radiation of different wavelength on erythrocytes at experimental type 2 diabetes mellitus
- 9) **Dmytro Zhulai** (Institute of Physics, National Academy of Sciences, Ukraine)
Anisotropy of dielectric loss tangent in dependence on type and concentration of nanoparticles in cadmium octanoate
- 10) **Svitlana Bugaychuk** (Institute of Physics, National Academy of Sciences, Ukraine)
Beam shaping with the desired intensity profiles based on the correlation technique
- 11) **Mehre Munir** (Iqra National University, Pakistan)
Economical method for distance measuring using laser light
- 12) **Fikret Mirzade** (Institute on Laser and Information Technologies - Branch of the Federal Scientific Research Centre "Crystallography and Photonics", Russian Academy of Sciences, Russia)
A study of stress effects on solidification microstructures at laser sintering of powders using a phase field approach
- 13) **Anatolii Lazarenko** (National Technical University "Kharkiv Polytechnic Institute", Ukraine)
Research of output signal spectrum of active running-wave interferometer
- 14) **Vyacheslav Maslov** (V. N. Karazin Kharkiv National University, Ukraine)
Laser resonator with infinitely adjustable of light output
- 15) **Mehre Munir** (Iqra National University, Pakistan)
Dual Band Microstrip E-Shape Patch Antenna Using Stack Configuration
- 16) **Mikhail Zverev** (Moscow Technological University (MIREA), Russia)
Calculation of the threshold current density of electron beam pumped lasers based on semiconductor heterostructures
- 17) **Olena Litsis** (Taras Shevchenko National University of Kyiv, Ukraine)
Nanodimension thin films based on lanthanide coordination compound for light-emitting devices
- 18) **Aleksandr Bekshaev** (I. I. Mechnikov Odessa National University, Ukraine)
Nature of the adsorption centers of the anion-dye J-aggregates on the surface of microcrystals in the silver-halide emulsion
- 19) **Yaroslav Bobitski** (Lviv Polytechnic National University, Ukraine)
Gold-Coated Gratings for SERS Applications
- 20) **Andrey Tarasov** (Moscow Institute of Physics and Technology (State University), Russia)
Interpretation of ZnO luminescence peculiarities by use of rate equation system

- 21) **Volodymyr Fesenko** (*Institute of Radio Astronomy, National Academy of Sciences, Ukraine*)
Extraordinary Dispersion Features of Polaritons in a Magnetic Superlattice
- 22) **Svitlana Ilchenko** (*International center "Institute of Applied Optics", National Academy of Sciences, Ukraine*)
Selective metal-dielectric multilayer structure for laser modulation
- 23) **Andrii Uklein** (*Institute of Physics, National Academy of Sciences, Ukraine*)
Characterization of improved laser phosphate glasses
- 24) **Volodymyr Gayvoronsky** (*Institute of Physics, National Academy of Sciences, Ukraine*)
Nonlinear optical analysis of bulk oxidized carbonaceous materials response
- 25) **Sergii Iakushev** (*Laser Zentrum Hannover, Germany*)
Progress and perspectives of Supercontinuum generation in ANDi microstructured photonic fibers
- 26) **Yuri Rapoport, V. Grimalsky, A. Lavrinenko, A. Boardman** (*Taras Shevchenko National University of Kyiv, Ukraine*)
Resonant Excitations of the Giant Second Harmonic in Dielectric-Graphene Metamaterials
- 27) **Elena Velichko** (*Institute of Radio-Physics and Electronics, National Academy of Sciences, Ukraine*)
Umov-Poynting Vector in Visualization of Plasmons

Wednesday, September 14, 2016

16:30 – 18:00 Poster Session II

Chair: **Andrey Degtyarev, V. N. Karazin Kharkiv National University, Ukraine**

- 1) **Mykola Nalyvaichuk** (*National Technical University of Ukraine (KPI), Ukraine*)
Comparative analysis of optical gravimeters
- 2) **Anatoliy Andrushchak** (*Lviv Polytechnic National University, Ukraine*)
Global maxima of linear electro-optic effect for selected widely used crystalline materials
- 3) **Viktor Buchenko** (*Taras Shevchenko National University of Kyiv, Ukraine*)
Optical and electrophysical properties of ITO/Si and ITO/ns-Si heterostructures
- 4) **Lali Kalandadze** (*Batumi Shota Rustaveli State University, Georgia*)
Influence of the Shape of Magnetic Particles on the Magneto-optical and optical Properties of Nano-dispersive Cobalt
- 5) **Oleksii Diachenko** (*Sumy State University, Ukraine*)
Investigation of Optical Properties of Magnesium Oxide Films Obtained by Spray Pyrolysis Technique
- 6) **Liudmyla Derzhypolska** (*Institute of Physics, National Academy of Sciences, Ukraine*)
Correlation amplification of diffraction resonance in periodic structures
- 7) **Mykola Yovchenko** (*Taras Shevchenko National University of Kyiv, Ukraine*)
Optical properties of nanocrystalline Si films derived by spectroscopic and multiangular ellipsometry
- 8) **Serhii Kabachok** (*Taras Shevchenko National University of Kyiv, Ukraine*)
Design of digital CCD spectrometer
- 9) **Halyna Petrovska** (*Lviv Polytechnic National University, Ukraine*)
Improving digital holographic interferogram quality by frequency filtering
- 10) **Anastasia Natarova** (*I. Kozedub Kharkiv Air Force University, Ukraine*)
Measurement of the Diameter of Optical Fibers by the Diffraction Method
- 11) **Vadim Ignatiev** (*V. N. Karazin Kharkiv National University, Ukraine*)
Digital Methods of Forming Holograms
- 12) **Mihail Ksenofontov** (*A.N. Sevchenko Institute of Applied Physics Problems, Belarus*)
Dual-Wavelength Tunable Fiber Ring Laser
- 13) **Oksana Sychova** (*Kharkiv National University of Radio Electronics, Ukraine*)
The Identification Method of the Photonic-Crystal Fiber Mode Field Diameter Maximum Position: Experimental Researches
- 14) **Andrii Derzhypolskyi** (*Institute for Physics, National Academy of Science, Ukraine*)
Estimation of quality of reconstructed image in self-associative Fourier holography scheme
- 15) **Vyacheslav Maslov** (*V. N. Karazin Kharkiv National University, Ukraine*)
Terahertz waveguide laser with smooth adjustment of feedback
- 16) **Andrey Degtyarev** (*V. N. Karazin Kharkiv National University, Ukraine*)
Characteristics of Modes of Dielectric Waveguide Resonator with a Large-scale Diffraction Mirror
- 17) **Petro Trokhimchuck** (*Lasya Ukrayinka East European National University, Ukraine*)
To a question of the interaction processes of nonlinear and relaxed optics
- 18) **Alexander Levchenko** (*V. N. Karazin Kharkiv National University, Ukraine*)
Electrical Properties of SiO₂-based Nanoporous Materials Containing Organic Dyes
- 19) **Halyna Klym** (*Lviv Polytechnic National University, Ukraine*)
Intrinsic Free Volume in Thick-film Layers Based on Semiconductor Cu_{0.1}Ni_{0.1}Co_{1.6}Mn_{1.2}O₄ Ceramics
- 20) **Elena Litvinova** (*V. N. Karazin Kharkiv National University, Ukraine*)
Retroreflective laser detector of acoustic oscillations
- 21) **Artem Tkachev** (*V. N. Karazin Kharkiv National University, Ukraine*)
A New Technique to Excite Zn Atoms to Triplet Rydberg States
- 22) **Anatoly Zadernovsky** (*Moscow Technological University, Russia*)
Analysis of intensity modulation response of analog fiber-optic links
- 23) **Lyubomyr Bartkiv** (*Lviv Polytechnic National University, Ukraine*)
Characterization of Concave Diffraction Grating for Use in Systems with Polymer Optical Fibers

- 24) **Halyna Klym** (*Lviv Polytechnic National University, Ukraine*)
Modeling of Degradation Process in nanostructured $\text{Cu}_{0.1}\text{Ni}_{0.8}\text{Co}_{0.2}\text{Mn}_{1.9}\text{O}_4$ ceramics
- 25) **Darya Yeryomka** (*Kharkiv State Academy of Design and Art, Ukraine*)
On design of radio spectrometer of FEL-based orbictron of terahertz range for application in art expertise technology of works of art
- 26) **Erick Baca Montero** (*University of Guanajuato, Mexico*)
Design of ultrabroadband chirped mirror
- 27) **Aleksandr Bekshaev** (*I. I. Mechnikov Odessa National University, Ukraine*)
Optical determination of the normal component of the gas flame speed
- 28) **Olena Udovytska** (*Institute of Physics, NAS, Ukraine*)
Monte Carlo Wave Function Method in the Problems of Atomic Motion in the Field of Laser Radiation