

University of Rzeszow, Poland  
I. Franko Drohobych State Pedagogical University,  
Ukraine

SCIENTIFIC AND TECHNICAL  
CONFERENCE



LASER TECHNOLOGIES.  
LASERS AND THEIR APPLICATION  
LTLA-2019

June 11-13, 2019  
Truskavets, Ukraine



Program committee hereby invites you to take part in  
*Scientific Conference*  
*“Laser technologies. Lasers and their application”*  
to be held on  
June 11-13, 2019 in Truskavets

TOPICS OF THE CONFERENCE

- 1. Physical and mathematical fundamentals of laser systems:**
  - Mathematic modeling of radiant technologies;
  - Interaction of highly concentrated energy currents with surface;
  - Functional materials for laser equipment.
- 2. Development of lasers and laser systems:**
  - Energy transfer dynamics in lasers
  - Heat processes in lasers;
  - Laser media development;
  - Laser system modelling and optimization.
- 3. Laser processing of materials:**
  - Technological lasers;
  - Laser technological system;
  - Equipment for lasers and mixed technologies;
  - Ablation, modification, annealing, precipitation, treatment and marking by laser bundle.
- 4. Laser deposition:**
  - Modeling of laser deposition processes;
  - Pulsed laser deposition;
  - Equipment for plume laser deposition;
  - Deposition of thin films and film structures.
- 5. Laser technical and technology applications:**
  - Diagnostics on the basic of laser transmitters;
  - Laser gauges;
  - Laser lithography;
  - Optoelectronic laser systems.
- 6. Lasers in nanotechnologies:**
  - Cluster, nanotubes and nanoparticles formation;
  - Nanosized processing and structuring;
  - Nanosized diagnostics.
- 7. Biomedical laser applications:**
  - Laser applications in medicine;
  - Laser applications in biological systems.

PLENARY SPIKERS

**prof. Bilynskiy Ihor** “Electrical and optical properties of the arrays different form quantum dot” I. Franko Drohobych State Pedagogical University, Ukraine.  
**prof. Cholewa Marian** “Development and Applications of laser techniques in Biology and Medicine” University of Rzeszow, Poland  
**prof. Czitrowszky Aladar** “Raman and absorption spectra of glass optical filters” Research Centre for Physics, Hungarian Academy of Sciences, Hungary  
**prof. Fedorenko Leonid** “Laser-stimulated processes of structural transformations of the surface of a solid. Current state and prospects” V. Ye. Lashkaryov Institute of Semiconductor Physics NASU, Ukraine  
**prof. Fekeshgazi Ishtvan** “Absorption spectra of glass” Uzhhorod National University, Ukraine  
**prof. Kosmyna Myron** “Growth and properties of disordered borate single crystals for laser application” Institute for Single Crystals of the NASU, Ukraine  
**prof. Kuzma Marian** “Laser processing in 3-d printing of metal” University of Rzeszow, Poland  
**prof. Medvids Artur** “Laser induced phase transition in TiO<sub>2</sub> crystal” Riga Technical University, Latvia  
**prof. Melnichuk Oleksandr** “Investigation of plasmon-phonon interaction in the infrared spectral range for thin ZnO films grown on SiO<sub>2</sub> substrates” Mykola Gogol State University of Nizhyn, Ukraine  
**prof. Mitsa Vladimir** “Thermal conductivity at low temperature of optical materials for IR lasers based on wide gap chalcogenide glasses” Uzhhorod National University, Ukraine  
**prof. Muravskyy Leonid** “Visualization of subsurface defects in composite structures using dynamic speckle patterns and speckle interferograms” Karpenko Physico-Mechanical Institute of the NASU, Ukraine  
**prof. Mytsyk Bohdan** “Laser conoscopic method for investigation of photoelasticity of crystals” Karpenko Physico-Mechanical Institute of the NASU, Ukraine  
**prof. Padyak Bohdan** “Effect of the Ag impurity on luminescent and laser properties of the Re<sup>3+</sup> ions in borate glasses” University of Zielona Góra, Poland  
**prof. Pokutnyi Sergey** “Optical spectroscopy of exciton states in nanosystems with semiconductor and dielectric quantum dots” Chuiko Institute of Surface Chemistry NASU, Ukraine  
**prof. Shopa Yaroslav** “Dynamic light scattering on evaporating suspension microdroplet with nanospheres” Cardinal S. Wyszyński University in Warsaw, Poland  
**prof. Stefaniuk Ireneusz** “X- and Q-band EPR spectroscopy of Co-doped YAP crystal” University of Rzeszow, Poland  
**prof. Suchocki Andrzej** “High pressure studies of phosphor materials” Institute of Physics, Polish Academy of Sciences, Poland  
**prof. Taranenko Viktor** “Photonic crystal microchip lasers” International Center - Institute of Applied Optics of the NASU, Ukraine  
**prof. Virt Ihor** “Nucleation and growth of nanocrystal formation upon pulsed-laser ablation” I. Franko Drohobych State Pedagogical University, Ukraine.

## SCIENTIFIC PROGRAM COMMITTEE

**Chairmen prof. Taranenko V.** International Center “Institute of Applied Optics” of the NASU, Ukraine

**Chairmen prof. Cebulskii J.** University of Rzeszów, Poland

**Chairmen prof. Virt I.** I. I. Franko Drohobych State Pedagogical University, Ukraine

**prof. Bobitski Ya.** Lviv Polytechnic National University, Ukraine

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**prof. Druzhinin A.** Lviv Polytechnic National University, Ukraine

**prof. Duriagina Z.** Lviv Polytechnic National University, Ukraine

**prof. Fekeshgazi I.** Uzhhorod National University, Ukraine

**prof. Medvid’ A.** Riga Technical University, Latvia

**prof. Muravskyy L.** Karpenko Physico-Mechanical Institute of the NASU, Ukraine

**prof. Sobchuk H.** RO in Kiev „Polish Academy of Sciences”, Poland

**prof. Padlyak B.** University of Zielona Gora, Poland

**prof. Polovinko I.** I. Franko Lviv National University, Ukraine

**prof. Teterkin V.** Lashkaryov V. Institute of Semiconductor Physics, NASU, Ukraine

**prof. Vlokh R.** Institute of Physical Optics of the NASU, Ukraine

**prof. Wal A.** University of Rzeszów, Poland

**prof. Wnuk M.** University of Rzeszów, Poland

## CONFERENCE LANGUAGES

English will be working language.

### DEADLINES

- Application for the participation of the conference and sending the report theses – **by April 1, 2019.**
- Information on the report entry into the conference program – **by Mai 1, 2019.**
- Distribution of invitations to the conference – **by June 1, 2019.**
- Arrival and registration of the participants – **June 10, 2019.**
- Start of the conference – **June 11, 2019.**
- End of the conference – **June 13, 2019.**

## PARTICIPATION FEE

The estimated cost participants – 20 Eu (including organization mail costs, coffee between the sittings, reports theses) to be paid on account (the account number will be given later) or at registration desk during registration.

### PLACE

Conference-hall of Beskyd Hotel, Truskavets

The participants of the conference will be accommodated in hotels in Truskavets and Drohobych and in the students’ treatment centre of Drohobych University.

### CONFERENCE MATERIALS

Abridged texts of reports will be published as a collection of conference works and handed in during the registration.

The selected papers will be published in the “Ukrainian Journal of Physical Optics”, “Materials Science – Poland”, and “Optica Applicata”, “Ukrainian Journal of Mechanical Engineering and Materials Science”. “Materials Science”

### REQUIREMENTS TO THE REPORTS DESIGN

Reports theses (**3 full pages**) and the registration form is to be sent to <[laser2019@ukr.net](mailto:laser2019@ukr.net)>

**before April 1, 2019.**

- Texts should be in English.
- Text editor: MS Word.
- Font: Times New Roman 14 pt.
- Spacing: single.
- Paragraph: space 10mm.
- Format: A4.
- Margins: left, write, upper, lower – 25 mm.
- References should be numerated in the order of the appearance in the text, reference numbers in square parentheses.
- All figures tables and formulas are inserted in the text after their being mentioned aligned centrally.
- They are placed one line under the text. The tables should be named and figures captioned (font size 12).
- Ordering of the material (the distance between the paragraphs is one line) the report in English (centrally aligned, capitalized, bold common); authors and co-authors full name (centrally aligned, small letters separated by comas); organizations name and mail address (in two lines, centrally aliened, small letters, italics); the text of the report (new line, common).

## REGISTRATION FORM

Surname \_\_\_\_\_

First name \_\_\_\_\_

Middle name \_\_\_\_\_

Degree \_\_\_\_\_

Title \_\_\_\_\_

Position \_\_\_\_\_

Organization \_\_\_\_\_

Department \_\_\_\_\_

Address \_\_\_\_\_

Telephone \_\_\_\_\_

E-mail \_\_\_\_\_

I plan to make the following report at the conference

Topic No..... \_\_\_\_\_

Accommodation requirements \_\_\_\_\_ persons \_\_\_\_\_

Data \_\_\_\_\_ signature \_\_\_\_\_

### Organizing & Local Committee

Prof. I. Virt – **chairmen** (UR),

Dr. Yu. Pavlovskyy – **secretary** (DSPU),

Dr. P. Potera – **secretary** (UR).

### Members:

Dr. S. Adamiak (UR), Dr. T. Kavetskyy (DSPU), Dr. V. Luzhetskyy (DSPU), Dr. R. Lymarenko (ICIAO), Dr. I. Petrycyn (DSPU), Dr. I. Stefaniuk (UR), B. Cieniek (UR), O. Didovska (DSPU), S. Frolov (ICIAO), L. Kasiy (DSPU), V. Khabinsky (DSPU), Yu. Tur (DSPU), M. Vovchansky (DSPU).

### CONTACT ADDRESS To:

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