

**Western Scientific Centre of NASU and Ministry of  
Education and Science of Ukraine**

Scientific Council on Laser Physics and Laser  
Technologies of NASU, Ukraine

V. Lashkarev Semiconductor Physics Institute  
of NASU, Ukraine

G. Karpenko Physical Mechanical Institute  
of NASU, Ukraine

International Center "Institute of Applied Optics"  
of NASU, Ukraine

Representative Office "Polish Academy  
of Sciences", Poland

Riga Technical University, Latvia  
University of Rzeszow, Poland

Lviv Polytechnic National University, Ukraine  
Drohobych Ivan Franko State Pedagogical  
University, Ukraine

**SCIENTIFIC AND TECHNICAL CONFERENCE**

**LASER TECHNOLOGIES.  
LASERS AND THEIR  
APPLICATION**

**June 7-9, 2017  
Truskavets, Ukraine**



*Program committee hereby invites you to take part in  
Scientific Conference "Laser technologies. Lasers  
and their application"  
to be held on  
June 7-9, 2017 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 modeling 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 pulsed 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.

**INVITED SPEAKERS**

**prof. Asmontas Steponas** "Photovoltage formation across Si p-n junction under illumination of laser radiation". State research institute Center for Physical Sciences and Technology, Lithuania

**prof. Cholewa Marian** "Laser techniques in Biology and Medicine". University of Rzeszów, Poland

**prof. Fedorenko Leonid** "Laser - assisted phase transformation in SiO<sub>x</sub>, TiO<sub>x</sub>, CN<sub>x</sub>, CN<sub>x</sub>:Ni layers". V.E. Lashkaryov Institute of Semiconductor Physics NAS of Ukraine

**prof. Fekeshgazi Ishtvan** "Spectral characteristics of optical coatings with slightly inhomogeneous chalcogenide films". V.E. Lashkaryov Institute of Semiconductor Physics NAS of Ukraine

**prof. Grankin Victor** "Wall Effects in Hydrogen Maser. Isotope Exchange of Polarized H-atoms". Pryazovskiy State Technical University, Ukraine

**prof. Khalilov Rovshan** "EPR signals in biological systems and their informative capacity for ecological research" Baku State University, Baku, Azerbaijan

**prof. Kosmyna Myron** "New materials based on binary borates for diode pumped lasers". SSI Institute for Single Crystals of NAS of Ukraine

**prof. Medvid' Artur** "Phase transition in semiconductors initiate by laser radiation". Riga Technical University, Latvia

**prof. Muravsky Leonid** "Laser phase-shifting interferometry methods for technical diagnostics of structural elements." Karpenko Physico-Mechanical Institute of the NAS Ukraine

**prof. Mytsyk Bohdan** "Stress-optical constants TGS crystals on the optical wavelength 0,63 mm". Karpenko Physico-Mechanical Institute of the NAS Ukraine

**prof. Padyak Bohdan** "New laser and luminescent materials, based on the Sm-doped borate glasses", University of Zielona Góra, Poland

**prof. Taranenko Victor** "Solid-state microlasers and their applications". International Center "Institute of Applied Optics" of the NAS Ukraine

**prof. Shopa Jaroslav** "Dual-wavelength laser polarimeter and its performance capabilities". University in Warsaw, Poland

## Scientific Program Committee

Co-chairmen **prof. Sizov F.** Lashkaryov V. Institute of Semiconductor Physics, NASU, Ukraine  
Co-chairmen **prof. Virt I.** Drohobych Ivan Franko State Pedagogical University, Ukraine  
Deputy Chairmen **prof. Muravskyy L.** Karpenko Physico-Mechanical Institute of the NASU, Ukraine  
**prof. Bobitski Ya.** Lviv Polytechnic National University, Ukraine  
**prof. Boichuk V.** Drohobych Ivan Franko State Pedagogical University, Ukraine  
**prof. Cebulskii J.** University of Rzeszów, Poland  
**prof. Druzhinin A.** Lviv Polytechnic National University, Ukraine  
**prof. Duriagina Z.** Lviv Polytechnic National University, Ukraine  
**prof. Sobchuk H.** Representative Office “Polish Academy of Sciences” in Kiev, Poland  
**prof. Padlyak B.** University of Zielona Góra, Poland  
**prof. Polovinko I.** Lviv Ivan Franko National University, Ukraine  
**prof. Taranenko V.** International Center “Institute of Applied Optics” of the NAS Ukraine, Ukraine  
**prof. Teterkin V.** Lashkaryov V. Institute of Semiconductor Physics, NASU, Ukraine  
**prof. Vlokh R.** Institute of Physical Optics of the NAS Ukraine  
**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 20, 2017.**
- Information on the report entry into the conference program – **by May 10, 2017.**
- Distribution of invitations to the conference – **by June 1, 2017.**
- Arrival and registration of the participants – **June 6, 2017.**
- Start of the conference – **June 7, 2017.**
- End of the conference – **June 9, 2017.**

## PARTICIPATION FEE

The estimated cost participants – 500 UAH (including organization mail costs, coffee between the sittings, excursions) to be paid at registration. Conference fee does not include accommodation.

## 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 center 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 “Ukrainian Journal of Mechanical Engineering and Materials Science”.

## REQUIREMENTS TO THE REPORTS DESIGN

Reports theses (**3 full pages**) and the registration form is to be sent to <[laser-2017@ukr.net](mailto:laser-2017@ukr.net)>

**before April 20, 2017.**

- Texts should be in English.
- Text editor: MS Word.
- Font: Times New Roman 14 pt.
- Spacing: single.
- Paragraph: space 10 mm.
- Format: A4.
- Margins: left, right, 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 aligned, 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**), Drohobych Ivan Franko State Pedagogical University, Ukraine,

Dr. Yu. Pavlovskyy (**secretary**). Drohobych Ivan Franko State Pedagogical University, Ukraine,

Dr. P. Potera (**secretary**). University of Rzeszow, Poland

**Members:** Dr. V. Luzhetskyy, Dr. R. Chubyk, Dr. T. Kavetskyy, Dr. I. Fartushok, Dr. J. Hushchak, T. Horbyak, V. Khabinskyy, Yu. Tur, N. Zraylo.

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