



2022 IEEE 9TH INTERNATIONAL CONFERENCE ON ADVANCED OPTOELECTRONICS AND LASERS (CAOL*2022)

September 07-09, 2022, Sozopol, Bulgaria

Organized and supported by

IEEE Photonics Society Ukraine Chapter
V. N. Karazin Kharkiv National University, Ukraine
Kharkiv National University of Radio Electronics, Ukraine
Technical University of Sofia, Bulgaria
University of Guanajuato, México
Odessa I. I. Mechnikov National University, Ukraine
Bulgarian Academical Association of Metrology
Institute of Physics, National Academy of Sciences (NAS) of Ukraine
V. Ye. Lashkaryov Institute of Semiconductor Physics (ISP), NAS of Ukraine
Ministry of Education and Science of Ukraine
National Scientific Centre "Institute of Metrology"

The 2022 IEEE 9th **International Conference on Advanced Optoelectronics and Lasers (CAOL*2022)** will be held in Sozopol, Bulgaria, **September 07 – 09, 2022**. CAOL*2022 will provide a forum for scientists in a wide area of laser physics and optoelectronics. The conference will cover wide frontiers in laser physics, photonics, nanotechnology, material physics, nonlinear optics, quantum optics and optical communications. Its characteristic feature is a stronger emphasis on the mathematical, physical and technological aspects of the problems in hand, together with detailed analysis of application problems. The technical program will consist of invited lectures and regular contributed papers.

This year in the frame of CAOL we will organize two accompanying events, Scientific Workshop on Data Science in Modern Optoelectronics and Laser Engineering (DSMOLE*2022) and Scientific Workshop "Measurement Uncertainty: scientific, normative, applied and methodical aspects" (UM*2022). DSMOLE*2022 will be dedicated to problems arising from merging of modern optoelectronics and laser engineering with data science, artificial and computational intelligence. UM*2022 will cover cutting-edge developments in metrology and adjacent fields.

CAOL conference has long history. Previous conferences were successfully held in 2003, 2005, 2008, 2010 and 2013 in Crimea, Ukraine, in 2006 in Guanajuato, México, in 2016 in Odessa, Ukraine, and 2019 in Sozopol, Bulgaria. Information on the previous international meetings on optoelectronics and lasers can be found in *IEEE Photonics Society Newsletter* (formerly *IEEE/LEOS Newsletters*): 4-1999, 4-2000, 4-2001, 3-2004 2-2006, 2-2009, 4-2010, 4-2011 etc.

Conference will be held in collaboration with IEEE/IPS, OSA and SPIE, and Regional Chapters of those societies.

Suggested CAOL*2022 TOPICS & Workshops

- **Laser physics and applications**
- **Nanotechnology and nanostructures**
- **Resonators, (micro)cavities and beam propagation**
- **THz photonics and electronics**
- **Laser material processing and additive manufacturing**
- **Nanophotonics, plasmonics, near-field optics**
- **Photonic Links and Optical Communications**
- **Photonic Bandgap and Photonic Crystal-Devices**
- **Specialty Fibers Including Structured one and Fiber Lasers**
- **Integrated Optics and Photonics**
- **Liquid Crystals and Device Applications**
- **Quantum Optics and Quantum Technologies**
- **Optical Measurements and Instrumentation**

- **Metamaterials, optical invisibility/cloaking, and transformation optics**
- **Nano-optoelectronics, nano-antennas, nano-sources and confined light emitters**
- **Biophotonics and Laser Medicine**
- **Photonics for Big Data and Big Data in Photonics**
- **Ultrafast Optics and Photonics**
- **Nonlinear Optics and Photonics**
- **Optoelectronic and Photonic Sensors**
- **Dynamic Characteristics, Internal Energy Flows and Singularities of Light Fields**
- **Organic Optics and Photonics**
- **Optical Materials**
- **Metrology of Optoelectronics and Lasers**
- **Renewable Energy and Sustainability**
- **Scientific Workshop on Data Science in Modern Optoelectronics and Laser Engineering (DSMOLE*2022)**
- **Scientific Workshop “Measurement Uncertainty: scientific, normative, applied and methodical aspects” (UM*2022)**

CAOL*2022 HONORARY CHAIR

Prof. Valerii V. Semenets, (Rector of Kharkiv National University of Radio Electronics, Ukraine)

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Prof. Yaroslav I. Lepikh (Odessa I. I. Mechnikov National University, Ukraine)

Prof. Pavel I. Neyezhnikov (National Scientific Centre “Institute of Metrology”, Ukraine)

Venue and Location:

The conference will be held in Sozopol the oldest Bulgarian city on the Black Sea Coast. Sozopol is located 35 km from Bourgas, the nearest international airport.

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<http://www.caol-conference.org>

Submission:

Due date for submission of camera-ready manuscripts is **May 15, 2022**. The length of manuscript shall be **4–6 full pages**. **Submission instructions** can be found on conference web site. Manuscript and conference language is **English**. Only electronic submissions will be accepted. The Conference Proceedings will be available at the registration desk. All accepted contributions will be submitted to **IEEE Xplore Digital Library**. Usually, soon after publication in IEEE Xplore Digital Library conference proceedings appear in other Abstracting and Indexing databases (**Scopus, Web of Science, Google Scholar**). Please note that **“No-show” contributions will not form a part of conference proceedings and will not be included in IEEE Xplore Digital Library.**