



UV and Higher Energy Photonics: From Materials to Applications 2024 (OP107)

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Recently, there has been a rapid and significant progress in the field of UV and higher energy photonics (UV to EUV) due to the availability of new UV and high energy light sources. Nano-materials such as nucleotides and proteins known as the essential biomolecules in living cells and semiconducting or plasmonic materials used in advanced nano-devices are analyzed and detected, imaged, and/or manipulated with use of UV and higher energy photons. Starting from the material growth related aspects, this conference includes theories and novel concepts on UV and higher energy photonics. It also includes experiments and developments of methods and instruments and MATERIALS more specifically nanostructured materials, which are used as devices for applications in catalysis, nano-lithography, nano-imaging, disinfection, analytical sensing but also in nano-photonics, bio-medical photonics, materials sciences and green and environmental sciences.

We would like again this year to emphasis on **environmental sciences and sustainability using high energy photons either through applications like decontamination by photocatalysis, disinfection and germicidal techniques using UV photons or sustainable absorbing or emitting materials (rare-earth free materials) as an example.**

The chairs of the conference proudly announce that the Young-Scientist award will be given to two outstanding presentations respectively in oral and poster sessions. Successful candidates must convey significant scientific content with a demonstrated excellent style of presentation including questions and discussions. In addition, from 2020, potentially **four contributed papers** will be **promoted to invited contribution.**

UV AND HIGH ENERGY MATERIALS AND LIGHT SOURCES

- high band gap semiconductors
- **nanostructured absorbing and/or emitting materials**
- LEDs and lasers for UV and higher energy
- nonlinear and ultrafast photonics for UV and higher energy
- fiber optics for UV and higher energy
- photonic crystal fibers

- high harmonic generation
- UV to EUV optics and sources.

UV AND HIGHER ENERGY MICROSCOPY AND SPECTROSCOPY

- resonant Raman microscopy
- nonlinear microscopy
- super-resolution microscopy
- plasmonics in UV and DUV
- coherent scattering imaging
- resonance Raman spectroscopy
- absorption spectroscopy
- fluorescence spectroscopy.

APPLICATIONS OF UV, DEEP UV, VACUUM UV, AND EXTREME UV PHOTONICS

- holography
- lithography
- **photocatalysis**
- **decontamination**
- **disinfection/germicidal techniques**
- material properties
- materials processing
- photoresists
- photodissociation
- photodamage
- **environmental analysis**
- **energy production.**

UV AND DEEP UV BIOSENSING AND ANALYSIS WITH UV AND HIGHER ENERGY PHOTONICS

- biosensor and analysis
- structure and dynamics of biomolecules
- native-fluorescence
- photochemical effect on biomolecules.

Present your research at SPIE Optics + Photonics

Below are abstract submission instructions, the accompanying submission agreement, conference presentation guidelines, and guidelines for publishing in the Proceedings of SPIE on the SPIE Digital Library. Submissions subject to chair approval.

Important dates

Abstracts due	7 February 2024
Registration opens	April 2024
Authors notified and program posts online	29 April 2024
Submission system opens for manuscripts and poster PDFs*	17 June 2024
Poster PDFs due for spie.org preview and publication	24 July 2024
Manuscripts due	31 July 2024
Advance upload deadline for oral presentation slides**	16 August 2024

*Contact author or speaker must register prior to uploading

**After this date slides must be uploaded onsite at Speaker Check-In

What you will need to submit

- Title
- Author(s) information
- Speaker biography (1000-character max including spaces)
- Abstract for technical review (200-300 words; text only)
- Summary of abstract for display in the program (50-150 words; text only)
- Keywords used in search for your paper (optional)
- Check the individual conference call for papers for additional requirements (i.e. extended abstract PDF upload for review or instructions for award competitions)

Note: Only original material should be submitted. Commercial papers, papers with no new research/development content, and papers with proprietary restrictions will not be accepted for presentation.

How to submit your abstract

- Visit the conference page: www.spie.org/op107call
- You may submit more than one abstract but submit each abstract only once
- Click the "Submit An Abstract" button on the conference page
- Sign in to your SPIE account or create an account if you do not already have one
- Follow the steps in the submission wizard until the submission process is completed

Submission agreement

All presenting authors, including keynote, invited, oral, and poster presenters, agree to the following conditions by submitting an abstract:

- Register and pay the author registration fee
- Oral presenters: recording and publication of your onsite presentation (slides synched with voice) for publication in the Proceedings of SPIE in the SPIE Digital Library
- Poster presenters: submit a poster PDF by the advertised due dates for publication in the Proceedings of SPIE in the SPIE Digital Library; poster PDFs may also be published and viewable in the spie.org program during and immediately after the event. Each poster must have a unique presenter; one person may not present more than one poster per session
- Email messaging for the conference series
- Submit a manuscript by the advertised due date for publication in the Proceedings of SPIE in the SPIE Digital Library
- Obtain funding for registration fees, travel, and accommodations
- Attend the meeting
- Present at the scheduled time

Review and program placement

- To ensure a high-quality conference, all submissions will be assessed by the conference chair/editor for technical merit and suitability of content
- Conference chairs/editors reserve the right to reject for presentation any paper that does not meet content or presentation expectations
- Final placement in an oral or poster session is subject to chair discretion

Publication of Proceedings in the SPIE Digital Library

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- Only manuscripts, presentations, and posters presented at the conference and received according to publication guidelines and due dates will be published in the Proceedings of SPIE in the SPIE Digital Library
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- More publication information available on SPIDigitalLibrary.org

Contact information

For questions about your presentation, submitting an abstract, or the meeting, contact your [Conference Program Coordinator](#).

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