



Photonics for Solar Energy Systems X (PE125)

Conference Chairs: **Alexander N. Sprafke**, Martin-Luther Univ. Halle-Wittenberg (Germany); **Jan Christoph Goldschmidt**, Philipps-Univ. Marburg (Germany); **Luana Mazzarella**, Technische Univ. Delft (Netherlands)

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Novel optic and photonic concepts overcome efficiency limits of conventional solar energy conversion and help to improve established technologies. Advances in optics, nanostructures, materials, and in fabrication technologies drive this progress. Photonic crystals or structures with tailored disorder, metamaterials, plasmonics, quantum dots, perovskites, and self-organization or microreplication find their application in photovoltaic cells and modules, solar hydrogen production, solar thermal systems and in related fields of energy efficiency, such as radiative cooling.

The scope of this meeting covers all relevant issues, such as fundamental physics, new phenomena, material properties, modeling, device design, fabrication technologies, and characterization. Submissions that address optical effects in nano- and microstructured materials for management of solar radiation are highly welcome.

Topics include, but are not limited to:

- photovoltaic modules with improved performance due to optical concepts
- nanostructures for novel light trapping concepts, wavelength or angular selectivity and antireflective surfaces
- photon management with luminescent materials, such as in down-conversion, upconversion and luminescent solar concentrators
- optical concepts for building integrated PV, for examples colored modules
- solar cells from novel materials such as perovskite, or organic semiconductors
- new device concepts that make use of optical phenomena
- multi-junction solar cells, especially photon management aspects such as photon recycling, intermediate reflectors etc.
- radiation steering including concentration and spectral splitting
- modeling of solar energy conversion systems, ranging from the simulation of photonic elements to the yield analysis of systems.

Present your research at SPIE Photonics Europe

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	30 November 2023
Authors notified and programme posts online	25 January 2024
Registration opens	8 January 2024
Submission system opens for manuscripts and poster videos/PDFs*	5 February 2024
Manuscripts due	20 March 2024

*Contact author or speaker must register prior to uploading

What you will need to submit

- Presentation 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 programme (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/pe125call
- You may submit more than one abstract, but submit each abstract only once
- Submit by clicking 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
- If your submission is related to an application track below, indicate the appropriate track when prompted during the submission process

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 programme during and immediately after the event. Each poster must have a unique presenter; one person may not present more than one poster
- 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 programme 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

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