Special Issue

XUV and X-ray Free-Electron Lasers and Applications

Message from the Guest Editors

Nowadays, free-electron laser (FEL) technology is rapidly developing and opens new perspectives for sources of extreme peak brightness in the X-ray spectral region with ultrashort pulse duration and full transverse coherence. Since the operation of FLASH as the first user-dedicated facility for soft-X rays in 2005, the capability of FEL facilities to operate towards higher X-ray energies opens up a new realm for experiments dedicated to coherent X-ray imaging, structure determination of molecules in biology, medical diagnosis, nondestructive testing, and the study ultrafast electron dynamics in matter. Nowadays, seven FEL facilities are in operation worldwide (FLASH, LCLS, SACLA, FERMI, PAL-XFEL, European XFEL, Swiss XFEL) and others are in an advanced stage of development.

- free-electron lasers
- coherent control
- coherent X-ray imaging
- diffractive imaging
- X-ray diffraction techniques
- X-ray ultrafast detectors
- X-ray microfocusing and nanofocusing

Guest Editors

Dr. Luca Poletto

Senior Research Scientist, National Council for Research of Italy - Institute of Photonics and Nanotechnologies (CNR-IFN), Via Trasea 7, 35131 Padova, Italy

Dr. Fabio Frassetto

Institute for Photonics and Nanotechnologies (IFN), Italian National Research Council (CNR), Padova, Italy

Deadline for manuscript submissions

closed (30 April 2023)

hv

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/si/88166

Photonics
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
photonics@mdpi.com

mdpi.com/journal/photonics

MDPI

Photonics

an Open Access Journal by MDPI

Impact Factor 1.9
CiteScore 3.5

mdpi.com/journal/photonics

MDPI

About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

Editor-in-Chief

Prof. Dr. Nelson Tansu
School of Electrical and Electronic Engineering (EEE), The University of Adelaide, Adelaide, SA 5005, Australia

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q2 (Instrumentation)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.8 days after submission; acceptance to publication is undertaken in 1.9 days (median values for papers published in this journal in the first half of 2025).