# Special Issue

# Recent Advances in Optical Parametric Amplifiers

## Message from the Guest Editor

Laser Optical Parametric Amplifiers (OPAs) have since the 60s made it possible to circumvent laser gain media properties to provide otherwise inacessible parameters. OPAs has been a vital technique to overcome the limited amount of suitable lasing media versus the many requirements that exist for state-of-the art facilities and their applications, and has seen strong adoption by the laser industry as a robust tool that can provide unique properties. This special issue invites manuscripts that introduce the recent advances in “optical parametric laser technology”. All theoretical, numerical, and experimental papers are accepted. Topics include, but are not limited to, the following:

- Ultra-broadband/few-cycle laser amplification;
- High average-power laser technology;
- Advances in nonlinear media: large apertures, QPM designs and progresses;
- Tunable OPA design and integration in laser systems;
- Synchronized multiple sources;
- PW level OPCPA based lasers;
- OPAs operating in the Mid-IR, deep mid-IR or in the vis-UV spectral range;
- State-of-the-art commercial systems;
- Optical Parametric Oscilators (OPOs).

## Guest Editor

Dr. Hugo Pires

Instituto de Plasmas e Fusão Nuclear - Instituto Superior Técnico, Lisbon, Portugal

## Deadline for manuscript submissions

closed (20 October 2024)

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# 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

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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).