



an Open Access Journal by MDPI

# **Ti:Sapphire Lasers and Their Applications**

Guest Editors:

### Dr. Volker Sonnenschein

Department of Energy Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8603, Japan

#### Dr. Hideki Tomita

Department of Energy Engineering, Nagoya University, Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8603, Japan

#### Dr. Ryohei Terabayashi

The Nuclear Professional School, The University of Tokyo, Shirakata-Sirane 2-22, Tokai, Ibaraki 319-1188, Japan

Deadline for manuscript submissions: closed (31 March 2022)



### **Message from the Guest Editors**

Dear Colleagues,

Ti:sapphire laser technology has matured, with many commercial 'turn-key' systems available to end-users. This has increased adoption in many application fields, such as multiphoton microscopy for biomedicine, Terahertz generation, and micromachining, as well as cutting-edge quantum optics research. Despite this maturity, new original developments of Ti:sapphire laser technology are still progressing rapidly. New pumping sources, such as (In)GaN laser diodes and LEDs, show promise to replace traditionally expensive frequency-converted Nd:YAG lasers. Advances in chirped pulse amplification have brought Ti:sapphire to the extreme intensities of Petawatt-class systems for nuclear fusion and fundamental physics research.

This Special Issue, entitled "Ti:Sapphire Lasers and Their Applications", of *Applied Sciences* aims to gather original research manuscripts within a broad scope covering both laser development and applications, as well as a select choice of review articles.

Dr. Volker Sonnenschein Dr. Hideki Tomita Dr. Ryohei Terabayashi *Guest Editors* 







an Open Access Journal by MDPI

# **Editor-in-Chief**

### Message from the Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo** Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

# **Author Benefits**

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Inspec,

CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

# **Contact Us**

Applied Sciences Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/applsci applsci@mdpi.com X@Applsci