Special Issue

Fiber Optics: Internet to Biomedical Applications

Message from the Guest Editor

As the world's population grows and lives longer, healthcare providers around the world are increasingly seeking advanced biomedical tools that enable more-efficient patient diagnosis, monitoring, and treatment. In this regard, the application of fiber optics to biomedical sensors is becoming increasingly important. At the same time, recent advances in minimally invasive surgery (MIS) require smaller disposable sensor catheters. The integration of fiber optics into the medical community has enabled safer procedures, more-efficient surgeries, faster recovery times, and better diagnostic investigations. The topics of interest include, but are not limited to, the following: fiber optic technology: material and fabrication, microstructured fibers, and highly nonlinear fibers; pulse propagation in nonlinear optical fibers: optical solitons, pulse shaping, pulse compression, pulse broadening, nonlinear optical processes, and all-optical tunable delays; and biomedical applications: diagnostic and therapeutic devices based on fiber optics, optical fiber catheters, laparoscopic devices using fibers, selective tissue ablation, and tissue imaging with different penetration depths.

Guest Editor

Prof. Dr. Mohammed N. Islam
Department of Electrical & Computer Engineering and Biomedical Engineering, University of Michigan, Ann Arbor, MI 48109, USA

Deadline for manuscript submissions

closed (31 December 2023)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/127498

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

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)