Special Issue

Optical Biosensors: Applications, Material Advances, and Technological Developments

Message from the Guest Editor

All scholarly research involves making some kind of measurement. This requires scientific instruments that detect and quantify the material properties of a sample being examined (or some change in them). If the sample is biological, then biosensors are utilized, which have an extensive history. There is great variety in terms of their operating principle, sensitivity, and other important properties, depending on the available technology. One of the most accurate of these sensors are optical biosensors, which detect and quantify the biological characteristics of a sample by measuring its optical properties. The revolutionary development of electronics (for example, in optical detectors and digital signal processing) and the worldwide “march” of laser have introduced intermetric accuracy and high-speed measurements into the field of optical biosensors. This Special Issue provides a platform to publish the latest results and developments in optical biosensors. It will present the most recent technological developments, including the use of new materials, in optical biosensors.

Guest Editor

Dr. Sándor Valkai

Institute of Biophysics, HUN-REN Biological Research Centre, 6726 Szeged, Hungary

Deadline for manuscript submissions

20 March 2026

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/si/245375

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

mdpi.com/journal/sensors

Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed

mdpi.com/journal/sensors

About the Journal

Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro
Dipartimento di Ingegneria Elettrica e dell'Informazione (Department of Electrical and Information Engineering), Politecnico di Bari, Via Edoardo Orabona n. 4, 70125 Bari, 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), PubMed, MEDLINE, PMC, Ei Compendex, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Instrumentation)