

# Special Issue

## Single-Molecule Biosensing: Recent Advances and Future Challenges

### Message from the Guest Editor

Single-molecule detection is a state-of-the-art bioanalysis technology, and it provides the ultimate sensitivity for the detection of low-abundance targets. The development of single-molecule biosensing technologies has emerged as a hot topic in recent years, and it provides a powerful tool for the efficient detection of rare analytes in complex biological and clinical samples. For this Special Issue, we welcome original research papers and reviews on current advances in the design of single-molecule biosensing systems based on single-molecule fluorescent, plasmonic, electrochemical, and surface-enhanced Raman spectroscopic detection and their applications in the detection of DNAs, RNAs, proteins, enzymes, and other biomolecules. Single-molecule detection-related theoretical research and device developments are also encouraged. The applications of single-molecule detection-based platforms for *in vivo* imaging and point-of-care detection of clinical disease biomarkers is of special interest. Reviews should provide an in-depth examination of the most recent research in a specific context or discuss the future challenges related to single-molecule detection.

---

### Guest Editor

Prof. Dr. Chunyang Zhang

School of Chemistry and Chemical Engineering, Southeast University,  
Nanjing 211189, China

---

### Deadline for manuscript submissions

closed (31 May 2025)



# Biosensors

---

an Open Access Journal  
by MDPI

---

**Impact Factor 5.6**

**CiteScore 9.8**

**Indexed in PubMed**



[mdpi.com/si/185284](http://mdpi.com/si/185284)

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

[mdpi.com/journal/  
biosensors](http://mdpi.com/journal/biosensors)





# Biosensors

---

an Open Access Journal  
by MDPI

---

Impact Factor 5.6  
CiteScore 9.8  
Indexed in PubMed

---



[mdpi.com/journal/  
biosensors](http://mdpi.com/journal/biosensors)

## About the Journal

### Message from the Editor-in-Chief

*Biosensors* is a leading journal, devoted to fast publication of the latest achievements, technological developments and scientific research in the exciting multidisciplinary area of biosensors. Both experimental and theoretical papers are published, including all aspects of biosensor design, technology, proof of concept and application. Special issues are devoted to specific technologies and applications, and a selection of the most outstanding papers each year is recognized. Pushing the boundaries of the discipline, we invite original papers, as well as timely reviews on cutting edge fields within the subject area.

---

### Editor-in-Chief

Prof. Dr. Giovanna Marrazza

Department of Chemistry “Ugo Schiff”, University of Florence, Via della Lastruccia 3, 50019 Sesto Fiorentino, Italy

---

### Author Benefits

#### High Visibility:

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

#### Journal Rank:

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

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 20.6 days after submission; acceptance to publication is undertaken in 3.5 days (median values for papers published in this journal in the second half of 2025).

