



sensors



an Open Access Journal by MDPI

Advances in Acoustic Wave Biosensors

Guest Editor:

**Prof. Dr. Venkat R.
Bhethanabotla**

Department of Chemical and
Biomedical Engineering,
University of South Florida
Tampa, Tampa, FL 33620, USA

Deadline for manuscript
submissions:

5 November 2024

Message from the Guest Editor

Dear Colleagues,

Acoustic wave devices have been used in materials characterization and in chemical and biological sensing for quite some time. Rayleigh wave surface acoustic wave (SAW) devices have been demonstrated in gas phase chemical sensing. Shear horizontal wave propagation in suitable cuts of piezoelectric materials has since allowed for liquid phase operation and construction of label-free biosensors using SAW devices. At higher frequencies of operation, SAW devices are much more sensitive as biosensors. Other types of acoustic waves generated in piezoelectric materials such as acoustic plate mode (APM) and flexural plate mode (FPM) have also been tried as chemical and biological sensors in the literature to a lesser extent. Theoretical understanding of these devices has progressed via modeling, including finite elements. Many advances in sensing materials and schemes have been described recently. All of these types of advances in the use of acoustic wave devices in biological sensing are welcome as contributions to this Special Issue of *Sensors* and are invited from researchers around the world.

Prof. Dr. Venkat R. Bhethanabotla
Guest Editor



mdpi.com/si/53804

Special Issue



sensors



an Open Access Journal by MDPI

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

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.

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 (*Chemistry, Analytical*) / CiteScore - Q1 (Instrumentation)

Contact Us

Sensors Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/sensors
sensors@mdpi.com
[X@Sensors_MDPI](#)