

Special Issue

Exploring the Sensing Potential of Acoustic Wave Devices

Message from the Guest Editors

Acoustic wave devices are instrumental in various applications, leveraging the sensing potential of acoustic waves for precise and sensitive measurements. These devices exploit the interaction between acoustic waves and the material properties to enable sensing capabilities. Changes in the physical or chemical properties of the material in contact with the acoustic wave can lead to detectable alterations in the wave characteristics, allowing for precise measurements. In addition, acoustic wave devices based on MEMS fabrication technology can be miniaturized, allowing for compact and portable sensing systems to be developed. Integration with microelectronics enables the creation of sensor arrays and multi-sensor platforms for simultaneous detection of multiple analytes.

- Capacitive Acoustic Wave Sensor;
- Piezoelectric Acoustic Wave Sensor;
- MEMS Acoustic Wave Sensor;
- Fiber-Optic Acoustic Wave Sensor;
- Surface Acoustic Wave (SAW) Sensor;
- Bulk Acoustic Wave (BAW) Sensor;
- Acoustic Emission Sensor;
- Microphone;
- Ultrasonic Sensor;
- Infrasonic Sensor;
- Sonar Sensor;
- Acoustic Camera.

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