Surface Acoustic Wave Sensors

Message from the Guest Editors

Dear Colleagues,

Surface acoustic wave (SAW) sensors are a class of microelectromechanical systems which rely on the modulation of surface acoustic waves generated by the photolithographically defined interdigital transducers on a piezoelectric substrate to sense a physical phenomenon. The success of SAW sensors is unquestioned to this day; various SAW sensors have been reported to successfully sense the phenomena of pressure, strain, torque, temperature, and mass. Evolving designs and sensitive materials are providing abundant options for the integration of new mechanisms to achieve selectivity and sensitivity. However, the SAW sensor technology is still underdeveloped, and few commercial products currently exist. There are still many challenges facing SAW sensors; the insufficient stability and reliability are a general issue that this community continues to confront. The solution lies in the sophisticated design of the sensor chip, and the exploration of stable sensitive materials. As a result of the abundant opportunities and challenges, we have decided that it is the opportune time to create a Special Issue in Sensors. […]

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Message from the Editorial Board

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