Special Issue

Intelligent Biomedical Devices and Systems

Message from the Guest Editors

Ultrasonic transducers and sensors are the core components of ultrasound-based instruments, including traditional ultrasound scanners, ultrasound endoscopes, focused ultrasound treatment or stimulation devices, acoustofluidic devices, sensing devices, wearable ultrasound devices, photoacoustic imaging devices, image-guided treatment devices, etc. Advances in ultrasonic transducer and sensor technology have led to an unprecedented performance of these instruments in terms of sensitivity, miniaturization, spatial resolution, temporal resolution, field of view, and cost efficiency. This Special Issue of *Micromachines* covers the design, fabrication, front-end electronics, characterization, packing, system integration of all types of ultrasonic transducers, and their applications in biomedical imaging, therapy, drug delivery, cell manipulation, industrial nondestructive testing, etc. It also covers relevant developments of ultrasound and photoacoustic instruments, imaging processing, and reconstruction algorithms.

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