Special Issue

Ultrasonic Transducers for Biomedical Applications

Message from the Guest Editors

Ultrasound transducer is one of the most critical components of any ultrasonic systems, which has been widely utilized in biomedical applications for decades, including imaging, therapeutics, blood flow measurement, and cell separation. In recent years, there have been continual advances in ultrasound transducer technology, which helps prevent diseases and improve quality of life. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but not limited to) the following:

- Micromachined ultrasonic transducers;
- High intensity focused ultrasound (HIFU) transducers;
- Flexible and wearable ultrasonic transducers;
- 1-3 piezocomposite transducers;
- Capacitive micromachined ultrasonic transducers (CMUT)
- Piezoelectric micromachined ultrasonic transducers (PMUT);
- Thin film ultrasonic transducers;
- Biomedical applications of ultrasonic transducers.

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About the Journal

Message from the Editorial Board

We are just entering the Next Wave of Technology (NWT) where actuators will play the same role as the computer chip did for computers/social media approximately four decades ago. Just in the U.S., production of $1 trillion year of electromechanical systems (vehicles, orthotics, manufacturing cells, freight trains, aircraft, etc.) will be impacted by the NWT, all driven by actuators. Five key trends can be found for the future perspectives: “Performance to Reliability”, “Hard to Soft”, “Macro to Nano”, “Homo to Hetero” and “Single to Multi functional”. We invite papers that primarily impact these economic sectors; those illustrating basic scientific principles are also welcome.

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