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Special Issue Reprint

Design and Fabrication of Micro/Nano Sensors and Actuators

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With the rapid development of materials science and manufacturing technology, numerous novel MEMS and NEMS devices, such as micro/nano-sensors and micro/nano-actuators, have been developed and applied in various fields. These devices are mostly made of silicon, metals, ceramics, glass, etc., whose mechanical and electrical properties have had a great influence on their working characteristics, including accuracy, sensitivity, and working range. In addition, the design and fabrication method can directly affect the reliability of these MEMS and NEMS devices, especially their lifetime, robustness, and stability under extreme conditions of shock, temperature, humidity, irradiation, chemical exposure, or other challenges. This Special Issue focuses on the structural design and optimization, system modeling and simulation, manufacturing, in situ characterization, and testing technologies of micro/nano-sensors and -actuators, providing research references for the further development and application of MEMS/NEMS devices.



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