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Special Issue Reprint

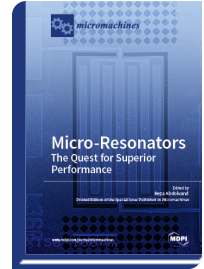
Micro-Resonators: The Quest for Superior Performance

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Microelectromechanical resonators are no longer solely a subject of research in university and government labs; they have found a variety of applications at industrial scale, where their market is predicted to grow steadily. Nevertheless, many barriers to enhance their performance and further spread their application remain to be overcome. In this Special Issue, we will focus our attention to some of the persistent challenges of micro-/nano-resonators such as nonlinearity, temperature stability, acceleration sensitivity, limits of quality factor, and failure modes that require a more in-depth understanding of the physics of vibration at small scale. The goal is to seek innovative solutions that take advantage of unique material properties and original designs to push the performance of micro-resonators beyond what is conventionally achievable. Contributions from academia discussing less-known characteristics of micro-resonators and from industry depicting the challenges of large-scale implementation of resonators are encouraged with the hopes of further stimulating the growth of this field, which is rich with fascinating physics and challenging problems.



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