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Carbon Based Materials for MEMS/NEMS

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Message from the Guest Editor

Silicon-based micromachines have dominated the progress in MEMS from more than two decades and that is mostly attributed to excellent materials properties of silicon particularly in stress management, doping and ease of surface and bulk micromachining processes. However, new applications involve, not only sliding and rotational motions, but also operations in more adverse atmospheric conditions. It is, therefore, highly desirable to look for new materials with enhanced mechanical, tribological, and electrical properties with the ability to withstand in adverse environmental conditions. The new candidate materials, based on carbon, are promising, and many advances have been made to overcome challenges in terms of stress management, MEMS processing and integration. In this Special Issue, we discuss current state-of-the-art MEMS/NEMS, based on carbon materials, with emphasis of contacting/sliding/rotational interfaces, including electrical/optical applications. Original contributions from academia and industry highlighting these and related aspects, with new interesting applications and directions, are welcome, presenting the next generation of MEMS/NEMS, based on carbon materials.

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Message from the Editor-in-Chief

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