

Special Issue

Process Technologies for Polymer-Based Sensor Systems

Message from the Guest Editors

Miniaturized sensors, which are increasingly deployed as parts of connected networks and smart systems, contribute indispensable roles for solving societal needs in, e.g., healthcare, communication, and transportation. This development substantially increases the number of required sensors and their performance characteristics, and hence the requirements on sensing technologies, applied materials, and acceptable tolerances. Polymer-based sensors afford a range of advantages for such applications, including tunable material properties and surface interaction. Most importantly, they are compatible with a broad variety of fabrication technologies from the macroscopic down to the nanometer domains, including classical subtractive patterning, emerging additive processes, and mass replication. For functional or auxiliary functions, polymers are often integrated into multi-material sandwiches or composites. This breadth of processes and materials offers both outstanding opportunities for advanced sensing applications and challenges for technological implementation. The aim of this Special Issue is to give readers an overview of innovative techniques in this rapidly evolving field.

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Deadline for manuscript submissions

closed (31 January 2024)



Sensors

an Open Access Journal
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Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/137053

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Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

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