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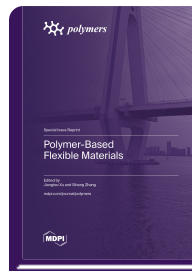
Polymer-Based Flexible Materials

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Compared to traditional flexible materials, such as metal-based, ceramic-based, and glass-based materials, polymer-based flexible materials have various advantages including low density, easy processing, excellent flexibility, and good environmental stability. Over the past few decades, polymer-based flexible materials have received significant attention due to the rapid development of the electronic industry, medical treatment, health, and other fields. For instance, flexible electronic technology shows great potential for reshaping the lives of human beings, but the bottleneck of flexible electronic technology is the availability of flexible substrates or flexible conductive materials, which can be resolved by modifying or doping polymer-based flexible materials. Moreover, it is possible to synthesize new polymer-based flexible materials or modify them for different purposes to endow them with corresponding functionality. This reprint presents a collection of research papers, communications, and review articles on the latest advances in the fields of synthesis, characterization, and the application of polymer-based flexible materials. The fields that will be discussed include: synthesis (organic elastomers, conductive polymers, and flexible organic networks); structural characterization; modeling; and applications (i.e., sensor, energy harvesting, energy storage, electromagnetic shielding, and biomedical).



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