Special Issue

Piezoelectric Polymers: Modelling, Processing and Applications

Message from the Guest Editors

Piezoelectric polymers are smart materials that convert mechanical stress into electric charge (direct effect) or deform under electric fields (inverse effect). Unlike rigid piezoelectric ceramics (e.g., PZT), they offer flexibility, lightweight design, and biocompatibility, enabling applications in wearables and implants. Key examples include polyvinylidene fluoride (PVDF) and its copolymer PVDF-TrFE, prized for their piezoelectricity in the □-phase after poling; polyamides (Nylon-11), used in sensors and energy harvesters; poly-L-lactic acid (PLLA), a biodegradable option for biomedical devices; and cellular polypropylene (PP), ideal for low-cost acoustic sensors. Piezoelectric polymers are transformative in flexible electronics, biomedicine, and green energy. Ongoing material innovations promise to overcome current limitations, cementing their role in next-generation technologies. This Special Issue is inviting the submission of studies on modeling, processing, and applications of piezoelectric polymers such as the following: (1) anaytical and numerical modeling of polymer piezoelectrets (transformation and application); (2) experimental analysis of piezoelectric polymers etc.

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Message from the Editor-in-Chief

Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.9.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

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