Advances in Polymer Technology

Special Issue on

Engineered Smart Polymeric Nanocomposites

CALL FOR PAPERS

Smart materials are able to sense and respond to changes in their environment and may be divided into two classes, i.e., passive and active smart materials. The materials belonging to the first class have the ability to change their properties according to environmental stimulation, such as shape memory materials, hydrophobic or hydrophilic structures. The second class has the capability of modifying their geometric and material properties under the application of electric, thermal, or magnetic external stimuli, thereby acquiring an inherent capacity to transduce energy.

This special issue on "Engineered Smart Polymeric Nanocomposites" is dedicated to recent advances in the design and research of smart polymer-based materials, including new polymer nanocomposites, new technologies and processes to manufacture them, for applications in sports, health care, construction, defense, transportation, protection, and similar.

This special issue is motivated by the observed increasing interest of various research groups in this field and will publish original research papers and review articles. It will give a global vision of researchers from universities, research centers, and industry around the world working on polymeric nanocomposites as smart materials and will share the latest results on the synthesis, characterization, and their applications in basic and industrial processes. This will also include a collection of comprehensive reviews from leading experts, research articles highlighting the most recent developments from notable groups in the community, and it will be a useful source of information for researchers.

Potential topics include but are not limited to the following:

- Shape memory nanocomposites
- Self-healing nanocomposites
- Smart hydrogel nanocomposites
- Bionanocomposites sensitive to external stimuli
- Smart polymeric nanocomposites obtained from additive manufacturing, melt spinning, electrospinning, and similar techniques
- Smart nanocomposite applications in advanced sectors, comprising tissue engineering, control drug delivery, textiles, packaging, etc.

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/apt/ppnsm/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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