

Special Issue on
**Hybrid Polymer Nanocomposites: Materials, Properties,
and Applications**

CALL FOR PAPERS

Hybrid polymer nanocomposites (HPNCs) are deemed a new area of research within polymer composites realm that attracted scientists and engineers in the last decade due to the unexpected properties they brought that can be harnessed for a wide range of applications, including aircraft structures, automotive, electronic packaging, biomedical equipment, space vehicle, home building, and infrastructure. This special class of composites allows the usage of one or more different materials to be hybridized within a polymer matrix host that all are significantly different in their physical and chemical properties as compared to when they are combined. The main challenge encountered with these materials is the quest for different approaches that help in making the interaction amongst the guest components with the polymer host the best possible to ensure that high quality of HPNCs materials is produced to suit the desired application.

This special issue aims to foster scientific understanding and technological advancement by providing a platform for materials scientists and engineers whose interest falls in developing new multifunctional hybrid material systems to serve in a variety of applications that require advanced technology.

High quality and original manuscripts related to novel HPNCs with significant potential for scientific and engineering applications are encouraged. We are also inviting authors to write review papers in the areas reflecting the current and future interests of HPNCs as listed below to highlight an emerging research field in a more comprehensive way. New developments and innovative applications of HPNCs are especially welcome.

Potential topics include but are not limited to the following:

- ▶ Graphene/CNTs based HPNCs
- ▶ Magnetic/semiconductor based HPNCs
- ▶ Hybrid nanofillers/hybrid polymer based nanocomposites
- ▶ Interphase and interface phenomena in HPNCs
- ▶ Characterization and performances of HPNCs
- ▶ Fatigue/endurance testing of HPNCs
- ▶ High ductility HPNCs
- ▶ Conducting based HPNCs
- ▶ HPNCs for construction
- ▶ Advanced flame retardant HPNCs
- ▶ HPNCs with high barrier properties
- ▶ Microwave absorptive and electromagnetic shielding effective HPNCs
- ▶ Shape memory HPNCs
- ▶ HPNCs mimicking natural materials
- ▶ HPNCs for energy

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijps/hpnm/>.

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

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