

Special Issue on  
**Synthesis and Applications of Multifunctional  
Nanomaterials Composites**

# CALL FOR PAPERS

Nanocomposites are a new generation of innovative materials, which are formed by mixing one or more dissimilar materials at the nanoscale in order to control and develop new and enhanced structures as well as properties. The properties of nanocomposites depend upon the individual components used, the morphology, and the interface characteristics. Multifunctional nanocomposites have received a great deal of consideration owing to their synergy or enhanced properties compared to their base counterparts. In the realm of multifunctional nanomaterials, significant effort has been focused on the metal-based systems by immobilizing metal onto diverse inorganic/organic supports to get the desired functional nanomaterials. In addition, effort has been made in loading metals on semiconductor metal oxides and highly conductive nanomaterial (carbon and graphene-based materials) using for surfactant or linkers. It is well known that, at nanoscale, the physical, chemical, and biological properties of materials differ fundamentally and often unexpectedly from their corresponding bulk counterpart because of the quantum confinement.

Synthesis of multifunctional nanomaterials composites have involved great attention as a result of the various properties produced by the nanomaterials composites. Hence, the synthesis of these multifunctional nanomaterials composites with high performance, good durability, and low cost is still a particularly challenging and tremendously urgent task in the renewable energy fields. Thus, great efforts have been dedicated to synthesize for various applications (renewable energy, sensors, catalysts, electronic applications, etc.). Hence, in order to aim the continuous progress in the synthesis of multifunctional nanomaterials composites and their applications, Journal of Nanomaterials will publish a new special issue dedicated to recent achievements, burning topics, problems, and critical reviews in the current field. This collection of works is expected to increase high visibility of the contributions to emphasize the major research achievements in the current scientific field. Moreover, the Journal of Nanomaterials will focus on all aspects of nanoscience and nanotechnology. This special issue will focus on the following.

Potential topics include but are not limited to the following:

- ▶ Synthesis and properties of noble and transition metal ions doped multifunctional nanomaterial composites
- ▶ Graphene-based semiconducting multifunctional nanomaterial composites
- ▶ Multifunctional nanocomposites and nanodevices
- ▶ Multifunctional nanooptics, nanophotonics, and nanooptoelectronics
- ▶ Photocatalysts properties of multifunctional nanomaterial composites
- ▶ Solar water splitting and oxygen evolution of multifunctional nanomaterial composites

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

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

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