

Nanomaterials: Synthesis and Applications

The basic challenge in the development of nanotechnology is to prepare nanostructures of desired material with tailored properties suitable for particular applications. On the other hand, functionalizing those nanostructures by changing their normal optical, electrical and optoelectronic properties through proper control of size, shape, doping, assembly or incorporating in other host matrix opens up more possibilities for their applications. Therefore, while the novel and unconventional fabrication methodologies are emerging every day to prepare nanostructures of several morphologies, their physical properties are being scrutinized in details to explore their applicability.

Though the revolution of nanotechnology initially started at some discrete places or laboratories, at present it received the global attention. Therefore, a brief overview on its region-wise progress is thought to be worth.

In this special volume (Volume 5) of the Journal of Nano Research, I tried to compile the research articles on the synthesis and application of nanomaterials, highlighting the recent trends of nano research in Mexico. The articles were received through invitation to the major research groups in Mexico and some other countries. They were peer reviewed by at least two reviewers, experts in their respective areas. The articles cover from the synthesis of nanoparticles (metals, semiconductors, and ceramics), nanocomposites, and other novel nanostructures to their applications. Hope this special volume would be useful to the readers working on nanomaterials.

Lastly, I would like to thank the Editor-in-chief of the Journal of Nano Research for inviting me to work as a guest editor to publish this special volume.

Guest editor

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