

Editorial

Nano based research has witnessed a tremendous growth in the last decade, thanks to the ultra sophisticated tools and techniques. When we talk about nanomaterials, it is basically a materials-science based approach towards nanotechnology. It studies materials having morphological features in the nanoscale and especially those that have special properties stemming from their nanoscale dimensions. Nano materials and nano technology have shown great possibilities, almost, in all the phases of science and technology. Solitary nano materials/particles have limited applications but when it combines with the other moieties, i.e. after forming a hybrid or even a composite, the characteristic properties gets a lift and the application limit expands dramatically. If we look in to the hybrid nanomaterial or even hybrid material, simply, it is a material that includes two moieties blended in the molecular scale and there will be some sort of interaction between these two (may be weak interactions, such as van der Waals interactions, hydrogen bonding or weak electrostatic interactions or may be strong chemical interactions). So, these materials are bit different from the simple blends, composites or nanocomposites. Again, hybrid nanomaterials and/or hybrid materials are not a recent invention, many occur naturally and some are developed and used even by the ancient civilization, may be without the proper knowledge of the structural mechanism. However, it was only at the end of the 20th and the beginning of the 21st century with the development of ultra modern equipments and characterization techniques, scientists got the opportunity to go deep into this vast ocean of nano world. This technological development has opened many perspectives for approaches toward new materials and devices. Combination of different analytical techniques gives rise to the novel insight into nano materials and makes it clear that bottom up strategies from the molecular/atomic level towards material design will lead to novel properties in to the final materials.

Today, we have a good number of international journals on nano materials/nanotechnology, addressing all aspects (from science to applications) of nano research. Many of the research articles are dealing with the hybrid nanomaterials and there was no specific journal for these specific materials. So, we were encouraged to come up with this new journal, “NANO HYBRIDS” (NH), zooming to hybrid nanomaterials and its applications. But NH also appreciates articles from other nano materials and nanotechnology related research.

It is my privilege to introduce this new journal, “Nano Hybrids” and its first volume, to the scientific community. And we would like to take this opportunity to thank, all of our highly renowned and respected editorial and international editorial board members, for their constant supports, invaluable contribution and discussion. Special thanks to Professor Emmanuel Iwuoha, Dr. Mohammad Afzaal, Dr. Arun Isloor, Dr. Gurumurthy Hegde and Dr. Victoria Volkis, for all their sincere efforts and help to materialize this new journal. We are also thankful and appreciate the works of the reviewers, for their skilled contribution to select good quality articles. We are also thankful to Mr. Thomas and the highly skilled editorial staff of Trans Tech Publication, for their support and commitment. Finally we would like to thank all the authors for trusting and contributing their valued scientific findings to publish in NH. We hope the articles published in this volume and the coming ones will inspire and stimulate readers to find new perspectives and achieve developments in the hybrid nano materials.

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Chief Editors