Preface

The field of nanoscience and nanotechnology has been growing rapidly since the early 1990s. Initially, this research area was populated mostly by researchers working in the fields of synthesis and processing of materials. Scientists were able to make new materials much faster than the rest of us could develop or understanding them. Later on these nanomaterials attracted the scientists those who were working in multidisciplinary fields, including chemistry, physics, electronics, biology, biotechnology, mechanics and bioengineering.

The multi-functional properties of nanomaterials offer a wide range of opportunities for addressing several research and development challenges in the area of nanoscience and nanotechnology. Multi-functional nanomaterials find wide application in a variety of sectors including agriculture, medicine, telecommunications, disaster management and environmental conservation.The focus of this special topic volume is on multifunctional nanomaterial development and their emerging applications towards commercialization. This special topic illustrates a new pathway to achieve novel practical applications using nanomaterials. This special topic can be utilized as a text for researchers as well as graduate students who are interested in nanomaterials based applications. This special topic volume is multidisciplinary by nature. The readers can acquire the necessary knowledge in physics, chemistry and biology related to these multifunctional applications which are associated with the emerging nanomaterials.

The special topic contains thirty nine experts contribution from international scientific research community and intended for researchers, scientists, engineers, graduate and undergraduate students, who are interested in emerging nanoscience and nanotechnology. The editors are grateful to contributors for manuscripts and regret if any copyright is being infringed unknowingly. We acknowledge the sincere efforts of Mr. Thomas Wohlbier, TTP publishing authority, for bringing the Special Topic Volume in its final shape.

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