## **Preface**

Functional materials are now very essential that is deeply merged in our day-to-day lives. These materials are warrant to lead our life with safer direction. This volume is a compendium of review as well as research articles, providing a wide spectrum of bottom-up fabrication approaches and their utilization on multiple fronts. This volume will be valuable to scientists, academicians, engineers and students who are keen to discover the advances in nanotechnology for favorable materials construction techniques and applications in relation to human health, environment and engineering.

The first two papers of this volume comprise review articles. One of this discuss comprehensively on using nanomaterial for solar energy conversion and another one discuss the application of nanomaterial is energy and environmental aspects. Energy conversion is noteworthy area of research in the face of depleting oil and gas. In this respect another four papers shows the recent progress in that subject. Further, application of functional materials in gas sensor and antibacterial activity also explored. Recent development in the synthesis of novel functional materials and its properties were investigated at the tail end. These papers are evidence of the importance of interdisciplinary among the branches of science.

Last but not least, we would like to express our thanks and gratitude to the authors for their generous contributions of knowledge in nanoscience, consequently materializing this volume for the benefits of interested parties in nanomaterials synthesis, processing and applications. 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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