



## Graphene-Based Materials and Applications

Guest Editors:

**Dr. Lu Qi**

Shandong Provincial Key Laboratory for Science of Material Creation and Energy Conversion, Science Center for Material Creation and Energy Conversion, School of Chemistry and Chemical Engineering, Shandong University, Jinan 250100, China

**Dr. John Parthenios**

Foundation for Research & Technology Hellas-Institute of Chemical Engineering Sciences (FORTH/ICE-HT), GR26504 Patras, Greece

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### Message from the Guest Editors

Graphene's two-dimensional planar structure with atomic-layer thickness and unique physical and chemical properties endows graphene with various functions. The few-layer stacking, rotational misalignment, and curled folding of graphene all significantly alter its functions, while heteroatom doping, designable pores, selective edge structures, and grain boundary misalignment often confer special properties and applications to graphene.

Graphene can be specifically optimized for performance in practical use through chemical modification, structural optimization, and multi-component composites, thus playing an important role in secondary batteries, supercapacitors, solar energy utilization, and biosensing.

This Special Issue aims to capture the latest advances in graphene-based materials and applications and discuss current challenges. The topics of interest for this Special Issue include but are not limited to the following:

- Synthesis and characterization techniques;
- Controllable regulation of structure and properties;
- New energy conversion and storage;
- Challenges in the industrialization.





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## Editor-in-Chief

### Prof. Dr. Alessandra Toncelli

Department of Physics, University of Pisa, 56126 Pisa, Italy

## Message from the Editor-in-Chief

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*Crystals* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
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