



*energies*



an Open Access Journal by MDPI

## Advances in Thermal Interface Materials (TIMs) with 2D Fillers

Guest Editor:

**Dr. Panagiotis Karagiannidis**

School of Engineering, Faculty of  
Technology, University of  
Sunderland, Sunderland SR1  
3SD, UK

Deadline for manuscript  
submissions:

**closed (28 February 2022)**

### Message from the Guest Editor

Dear Colleagues,

Thermal management requirements have been increasing rapidly in the past few decades with the developments in consumer electronics. Faster microprocessors, high-powered LEDs, battery and photovoltaic modules, and 5G communication systems are examples of only some of the applications that require more efficient thermal interface materials (TIMs). We have also seen significant research progress in the last decade in TIMs enhanced by 2D crystals. Graphene and hexagonal boron nitride offer high thermal conductivity, surface area, and aspect ratio etc., which make them some of the most promising nanofillers for the next generation of TIMs.

The aim of this Special Issue is to capture the latest advances in the area of polymer as well as metal matrix composite TIMs enhanced with 2D fillers. Contributions on synergistic property enhancements obtained from 0D and 3D combined with 2D fillers are also welcomed. Hence, we encourage authors to submit details of their latest achievements to this Special Issue. Original research articles, review articles, as well as short communications are invited.

Dr. Panagiotis Karagiannidis

*Guest Editor*



[mdpi.com/si/90936](https://mdpi.com/si/90936)

# Special Issue



# energies



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Enrico Sciubba

Department of Mechanical and  
Aerospace Engineering,  
University of Roma Sapienza, Via  
Eudossiana 18, 00184 Roma, Italy

## Message from the Editor-in-Chief

*Energies* is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compindex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

**Journal Rank:** CiteScore - Q1 (*Engineering (miscellaneous)*)

## Contact Us

---

*Energies* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/energies](http://mdpi.com/journal/energies)  
[energies@mdpi.com](mailto:energies@mdpi.com)  
[X@energies\\_mdpi](https://twitter.com/energies_mdpi)