



*thermo*



an Open Access Journal by MDPI

## Thermal Processes and Thermal Properties of Sustainable Polymeric Materials

Guest Editors:

**Prof. Dr. George Z. Papageorgiou**

Department of Chemistry,  
University of Ioannina, P.O. Box  
1186, GR-45110Ioannina, Greece

**Prof. Dr. Johan Jacquemin**

Materials Science, Energy, and  
Nano-Engineering MSN  
Department, Mohammed VI  
Polytechnic University, Lot 660,  
Hay Moulay Rachid, Ben Guerir  
43150, Morocco

### Message from the Guest Editors

Natural polymers like wood, wool, and cotton cellulose have long been used by humans, providing heat through wood combustion. Sustainable polymeric materials have gained interest lately. Polymer processing involves mass transfer, heat transfer, flow, and deformation. Heating softens the polymer, while cooling or crosslinking sets the shape. The relationship between processing, structure, properties, and performance is a key focus in polymer science. Moreover, pyrolysis of biomass or polymeric waste offers new pathways for fuel, monomer, and chemical production. Thermal analysis techniques like DSC and TGA study polymer thermal properties and processes.

Topics include but are not limited to:

- Thermal properties of polymers
- Thermal processes of polymers
- Thermal analysis of polymers
- Crystallization and melting of polymers
- Thermal degradation of polymers
- Thermo-oxidative degradation of polymers
- Thermal polymerization
- Pyrolysis of biomass or polymer wastes
- Thermochemical conversion of biomass
- Heat transfer
- Thermodynamics of polymer processing
- Thermochemical processes in biorefineries
- Combustion

Deadline for manuscript  
submissions:

**31 October 2024**



[mdpi.com/si/168020](https://mdpi.com/si/168020)

**Special** Issue



*thermo*



an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Johan Jacquemin**

Materials Science, Energy, and  
Nano-Engineering MSN  
Department, Mohammed VI  
Polytechnic University, Lot 660,  
Hay Moulay Rachid, Ben Guerir  
43150, Morocco

## Message from the Editor-in-Chief

*Thermo* (ISSN: 2673-7264) is an international, peer-reviewed, and open access journal that publishes original research papers, reviews, and Special Issues dealing with experimental, theoretical, and applied thermal sciences. Both theoretical (simulation) and/or experimental research papers within our journal's scope are of particular interest, including satellite-related topics considering thermophysics, solubility phenomena, chemical thermodynamics, and chemical engineering. We encourage scientists to publish their results in as much detail as possible, and there is no restriction on the maximum length of papers. We greatly appreciate suggestions for enhancing the journal.

## Author Benefits

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

**High Visibility:** indexed within **ESCI (Web of Science)**, **Scopus**, **EBSCO**, and **other databases**.

**Rapid Publication:** manuscripts are peer-reviewed and a first decision is provided to authors approximately 21.6 days after submission; acceptance to publication is undertaken in 3.1 days (median values for papers published in this journal in the first half of 2024).

## Contact Us

---

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

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

[mdpi.com/journal/thermo](http://mdpi.com/journal/thermo)  
[thermo@mdpi.com](mailto:thermo@mdpi.com)  
[X@Thermo\\_MDPI](https://twitter.com/Thermo_MDPI)