

## Special Issue

# Preparation, Characterization, and Application of Degradable and Antibacterial Materials

### Message from the Guest Editor

Petroleum-based plastics are not sustainable and might exacerbate the risk for air, water, and soil pollutions. Wood, lignocellulose, starch, sugars, proteins, and plant oils are the most widely used renewable feedstocks in making different bio-based polymers for different applications. Biodegradable polymers have been developed to fulfill most of the functions of petroleum-based materials in applications ranging from packaging to durable goods and have a major advantage over nonbiodegradable polymers in terms of degradation. The aim of this Special Issue is to cover new research topics related to biodegradable and antibacterial polymers, blends, gels, dispersions, and composites, from renewable resources, bacterial fermentation, and polymerization of biomonomers. Studies on the characterization, processing, rheology, shape-memory effect, self-healing, applications, and life cycle assessment of different types of bio-based and/or biodegradable polymers and composites are within the scope of this Special Issue. Researchers are cordially invited to contribute original research and review articles to this Special Issue.

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### Guest Editor

Dr. Samy Madbouly  
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### Deadline for manuscript submissions

closed (31 May 2024)



## Molecules

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## About the Journal

### Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 30th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

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### Editor-in-Chief

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