



Advanced Nanostructured Materials for Antimicrobial Applications

Guest Editor:

Dr. Denver Linklater

School of Science, RMIT
University, Melbourne, Australia

Deadline for manuscript
submissions:

closed (30 September 2023)

Message from the Guest Editor

A decade ago, it was discovered that the nanopillar topography of insect wings such as cicadas, dragonflies and damselflies, were not repelling bacteria as previously surmised, but rather bacteria were attaching and consequently being killed. The nature of the antimicrobial effect of insect wings has now been found to include activity toward both environmental fungi and pathogenic yeasts. Specifically, the antimicrobial nature is associated with the physical disintegration of attached microbes due to a mechanical injury. This exciting new discovery implies that, if successfully replicated on the surface of biomaterials and implantable devices, antibiotics would no longer be required to kill bacteria, and other microbes, that attach on such surfaces.

This Special Issue aims to present work detailing the current state-of-the-art in advanced manufacturing of nanostructured nanomaterials for antimicrobial applications. Potential topics include, but are not limited to materials with antifungal (fungicidal), antibacterial (bactericidal) and/or antiviral (virucidal) efficacy; antimicrobial nanoparticles; antimicrobial nanostructured surfaces.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

School of Geography, Earth and Environmental Science,
University of Birmingham,
Birmingham B15 2TT, UK

Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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), PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank: JCR - Q2 (Physics, Applied) / CiteScore - Q1 (General Chemical Engineering)

Contact Us

Nanomaterials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/nanomaterials
nanomaterials@mdpi.com
[X@nano_mdpi](https://x.com/nano_mdpi)