

Special Issue

Nanotechnology in Microbiology

Message from the Guest Editor

Nanomaterials such as nanoparticles, nanorods, nanowires, and 2D materials can act as drug carriers, enhancing the antibiotic payload or exert other lethal damage to bacteria via nanomaterial-membrane interactions. Similarly, nanostructured surfaces have been shown to lethally tear apart contacting bacterial cell membranes. Nanostructured topographies may be applied to the surfaces of implants and medical devices, even to high-touch surfaces in public spaces to evade the incidence and transmission of bacterial infection. With further research and development, nanotechnology and nanomaterials may become the gold standard for prevention and treatment of bacterial infections in the era of antibiotic resistance. This Special Issue aims to cover research related, but not limited, to:

- Micro-nanostructured antifouling and antibacterial surfaces;
- Antimicrobial nanomaterials;
- Nanomaterial-based diagnostics and therapeutics for bacterial infections;
- Mechanisms of antibacterial action of nanomaterials.

Guest Editor

Dr. Denver Linklater

School of Science, RMIT University, Melbourne, Australia

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Micromachines
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
micromachines@mdpi.com

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Message from the Editor-in-Chief

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Editor-in-Chief

Prof. Dr. Ai-Qun Liu

1. Department of Electrical and Electronic Engineering, The Hong Kong Polytechnic University, Hong Kong, China
2. School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore 639798, Singapore

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