

Formation of Biofilms and Its Applications

Guest Editor:

Dr. Akiko Ogawa

Department of Chemistry and
Biochemistry, National College of
Technology (KOSEN), Suzuka
College, Shirokocho, Suzuka, Mie
510-0294, Japan

Deadline for manuscript
submissions:

30 September 2024

Message from the Guest Editor

Biofilms are made up of attached (gathered) microbes and the extracellular polymeric substrates (EPS) produced by them, the feature of which depends on the species of microbe community and the components of EPS. In industrial fields, they often affect the performance and lifetime of (parts of) plants, buildings, storage tanks, and other facilities. In environmental fields, they contribute to ecosystems and bioremediation. Hence, biofilms can be interpreted as a part of coatings. Of course, chemical, physical, and electrical coatings are generally powerful tools for protecting and maintaining the targets without the influence of basal materials to both accelerate or inhibit biofilm formation.

In particular, the topic of interest includes, but is not limited to, the following:

- The specific features of biofilm formed on a coating;
- Artificial biofilms and the application to industrial fields;
- The microbiomes of biofilms derived from wastewater treatment facilities, oil tanks, buildings, etc.;
- Regulating biofilm formation with intelligent coatings;
- The differences between non-treated biofilms and treated biofilms with biocides, chemical compounds, lights, coating, etc.



mdpi.com/si/98561

Special Issue

Editors-in-Chief

Prof. Dr. Wei Pan

State Key Laboratory of New
Ceramics and Fine Processing,
School of Materials Science &
Engineering, Tsinghua University,
Beijing 100084, China

Dr. Emerson Coy

NanoBioMedical Centre, Adam
Mickiewicz University in Poznań,
ul. Wszechnicy Piastowskiej 3, 61-
614 Poznań, Poland

Message from the Editorial Board

Now more than ever, research is called for to produce technologies and improve knowledge to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. *Coatings* is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. *Coatings* publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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

Journal Rank: JCR - Q2 (*Materials Science, Coatings & Films*) / CiteScore - Q2 (*Surfaces and Interfaces*)

Contact Us

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

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

mdpi.com/journal/coatings
coatings@mdpi.com
X@Coatings_MDPI