

Special Issue

Liquid–Solid Contact Electrification: Recent Studies and Applications

Message from the Guest Editors

Significant progress has been made in the study of liquid–solid contact electrification, especially at the micro-/nanoscale. Liquid–solid contact electrification has wide applications in various fields, including microenergy harvesting, microfluidic technology, self-cleaning technologies, sensors, and biomedical applications. This Special Issue aims to publish papers on emerging important technologies in the field of liquid–solid contact electrification. Topics of interest include, but are not limited to, the following:

- Studies on the mechanisms of liquid–solid contact electrification;
- Precise control of microfluids in microfluidic applications;
- Development of nanogenerators for efficient energy conversion in energy harvesting, widely applied to microsensors and wearable devices;
- Use of liquid–solid contact electrification in self-cleaning technologies for surface contamination removal;
- Sensitive detection of environmental parameters in sensor and biomedical fields and its application in early disease diagnosis.

Guest Editors

Dr. Ning Li

Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, Beijing 101400, China

Dr. Cunlong Yu

CAS Key Laboratory of Bio-inspired Materials and Interface Sciences, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences, Beijing 100190, China

Deadline for manuscript submissions

20 October 2025



Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



mdpi.com/si/237287

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

[mdpi.com/journal/
appls](https://mdpi.com/journal/appls)





Applied Sciences

an Open Access Journal
by MDPI

Impact Factor 2.5
CiteScore 5.5



[mdpi.com/journal/
applsci](https://mdpi.com/journal/applsci)



About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,
20133 Milano, Italy

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

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)