Special Issue

Plasmonics Technology in Surface Science

Message from the Guest Editor

Plasmonic technology, which exploits the interactions between electromagnetic fields and free electrons in metal nanostructures, has become a cornerstone in advancing surface science. The resonant oscillations of conduction electrons, known as surface plasmon resonances (SPRs), enable unprecedented control over light at the nanoscale, far beyond the diffraction limit of conventional optics. This capability has profound implications in various fields such as sensing, imaging, and information processing. In surface science, plasmonic phenomena can be leveraged to enhance surface reactions, improve the sensitivity of surface-based sensors, and manipulate molecular-scale interactions. Understanding and utilizing plasmonic effects in conjunction with surface phenomena is crucial for developing advanced technologies in areas like energy harvesting, catalysis, and biomedical applications. As such, the study of plasmonics in surface science is not only scientifically rich but also technologically essential, bridging nanophotonics and surface chemistry to address some of the most pressing challenges in modern material science and engineering.

Guest Editor

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Message from the Editor-in-Chief

Surfaces and interfaces are ubiquitous, and their relevance in Chemistry, Physics, Catalysis, Materials Science & Engineering, Nanoscience, Biology and Nanomedicine is nowadays well acknowledged. Similarly, surfaces cannot be neglected when targeting applications in many strategic fields, such as sensors, energy conversion and storage, environmental and food science, and medical devices.
Surfaces is a new Open Access journal that will provide rapid publication of scholarly articles on studies related to surfaces and interfaces. Its mission is to publish cutting edge articles and conference proceedings and organizing special issues to highlight outstanding research on specific topics, encouraging the application of a rigorous Surface Science-based approach to many complex interesting phenomena and breaking boundaries among different disciplines.

Editor-in-Chief

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