



In Situ and Operando Catalyst Characterization

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Message from the Guest Editors

Dear Colleagues,

The development of new technologies to meet the current energy and environmental challenges requires the acquisition of very fundamental knowledge regarding the structure and activity of catalytic materials at the nanometric scale.

A particularly challenging endeavor is to derive an accurate correlation between an atomically well-defined site and its catalytic activity. In many cases, standard characterization techniques provide only area-averaged information, so connecting specific figures of merit concerning the reactivity to a single type of catalytic site is not trivial, given that various structural and morphological features can be co-present on the same “real” catalyst.

In this Special Issue, we cordially invite manuscripts that address advanced in situ and operando characterizations of catalysts, electrocatalysts, and, in general, other dynamic processes occurring on surfaces, both through local and defocused probes. We also welcome papers employing in silico approaches to study dynamic processes on surfaces.

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Editor-in-Chief

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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.

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