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Nanostructures for Electrochemistry: From Synthesis and Characterization to Applications

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Message from the Guest Editors

Electrochemistry is one of the most promising routes to address the current issues of clean energy generation and supply. Independent from the final application (e.g., battery, electrolysis of water, and so on), the control of composition, crystal structure, size, support interaction and morphology of nanostructured materials are essential factors for producing highly performing and stable electrochemical devices. A great number of physical and chemical approaches have been developed for the production of nanostructures for electrochemical applications, and further efforts are needed to optimize the process and translate the research studies into the industrial sector, for which low cost, reproducibility and sustainability are the key words, as well as material design process and final performances.

This Special Issue focuses on the state-of-the-art routes for nanostructures design and detailed characterization techniques for the comprehensive understanding of nanostructured materials' behavior and their future perspectives in the electrochemical research field.