

Special Issue

Nanostructured Platinum-Containing Electrocatalysts for Hydrogen Energy

Message from the Guest Editors

Low-temperature fuel cells with a proton-exchange membrane are an important part of the rapidly developing field of hydrogen energy. Electrocatalysts are key components of such electrochemical devices. The best catalysts for polymer membrane fuel cells are platinum and its alloys when used on an electron-conducting carbon support. The use of alloying components of various natures, in combination with the formation of a wide range of complex structural types of Pt-M nanoparticles (solid solutions, intermetallic compounds, core-shell, gradient NPs, nano-frames, etc.), make it possible to significantly increase the activity, selectivity, and stability of catalysts in electrochemical reactions and). This Special Issue will provide information on new advanced Pt-M and PMG-free catalysts that are promising for use in PEMFC. We welcome papers devoted to the development of new methods of synthesis and the search for new architectural types of nanoparticles with high catalytic activity, the study of the mechanism of reactions occurring on such catalysts, the analysis of the mechanisms of catalyst degradation, and the search for ways to increase their durability.

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Editor-in-Chief

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