Special Issue

Alloy Nanocatalysts for Fuel Cells

Message from the Guest Editors

Alloying is one of the most powerful tools available to the designer of metallic catalysts. Alloying can be used to modify both the activity and the durability of a catalyst, both of which help to lower the cost, which is particularly important when such catalysts employ precious and/or rare metals. Platinum alloys have been investigated for the last half-century, particularly for the oxygen cathode, because the oxygen reduction reaction (ORR) is in greater need of catalytic assistance than the hydrogen anode in acidic electrolytes. Alloys are also important for the hydrogen anode, because the hydrogen oxidation reaction (HOR) can be easily poisoned by carbon monoxide present in hydrogen fuels produced from natural gas. Fuel cells are not limited to hydrogen as a fuel, but can also utilize alcohols and even hydrocarbons, and alloys are also extremely useful for their catalytic reactions. This Special Issue aims to bring together contributions from a diverse range of fuel cells and their associated fuels and electrolytes in order to cross-fertilize ideas that are common to all. We also welcome contributions from a wide range of viewpoints, from the applied to the fundamental.

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Editor-in-Chief

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