Special Issue

Applications of Two-Dimensional Layered Nanomaterials in Electrochemical Energy

Message from the Guest Editors

The rapid development of graphene-based catalysts is focused on the increase of the electronic state and the active site by employing physical concepts or heteroatom doping. For example, by controlling the graphene size, the number of layers, defect density, surface curvature, and adding heteroatom dopants, the increase in electronic state or active site can significantly enhance the catalysis reaction. With breakthroughs in research on graphene-based catalysts, other graphene-like two-dimensional (2D) materials such as transition metal dichalcogenides (TMDs), transition metal oxides, and other 2D compounds have also attracted great attention. Up to now, 2D layered nanomaterials have been widely investigated in the fields of electrochemical energy (such as dye-sensitized solar cells, supercapacitors, water-splitting cells, and energy storage devices). To update the latest development of 2D material-based catalysts, this Special Issue welcomes both reviews and original research articles in the field of electrochemical energy based on 2D layered nanomaterials. Prof. Dr. Dung-sheng Tsai
Prof. Dr. Long Hu

Guest Editors

Dr. Dung-Sheng Tsai

Department of Electronic Engineering, Chung Yuan Christian University, Taoyuan 32023, Taiwan

Dr. Hu Long

School of Mechanical Science & Engineering, Huazhong University of Science and Technology, Wuhan 430074, China

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
catalysts@mdpi.com

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