Special Issue

Graphene and Graphene-Like Carbon Nitride for Advanced Catalytic Capability

Message from the Guest Editor

Graphene and graphene-like carbon nitride is good support for composite materials. At the same time, graphene-like carbon nitride (g-C3N4) has also risen as a new catalytic material, owing to its cheap production, excellent chemothermal properties, and environmentally friendly nature. Furthermore, its optical and electronic properties make it a promising photocatalyst for solar energy harvesting. g-C3N4 has been extensively used for the degradation of pollutants, hydrogen and oxygen evolution, water splitting, and carbon dioxide reduction. Therefore, due to their conductive and catalytic behaviors, graphene and graphene-like carbon nitride appear to be strong composite candidates. Still, the improvements in these materials' efficiency can be achieved using various changes, such as doping with metal, non-metal, and composite with other semiconductors, and also changing their morphology. Heterojunction between graphene and graphene-like carbon nitride is also established. Studies of advanced properties of prepared material, with insight into photochemical and photo-degradation properties, are encouraged.

Guest Editor

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