

Special Issue on
**The Photo/Electrocatalytic Materials for Application in
Environment and Energy**

CALL FOR PAPERS

With a rising global population, increasing energy demands, and coming climate change, major concerns have been raised over the deficiency of our energy structure. One promising scheme to promote this point is striving to acquire fossil-free fuels via artificial, low-cost, and sustainable strategies while providing the feedstocks needed to make the products we use daily. To be specific, adopting photo- or electrochemical method to achieve the clean energy conversion, for example, converting molecules in the atmosphere (e.g., water, carbon dioxide, and nitrogen) into higher-value products (e.g., hydrogen, hydrocarbons, oxygenates, and ammonia), is of crucial significance. Photo/electrocatalysts play a key role in these energy conversion technologies because they enhance the redox reaction rate, efficiency, and selectivity during chemical transformations. Today's photo/electrocatalysts, however, are usually inefficient. The grand challenge is to develop advanced catalysts with adequate ability of widespread adoption throughout the clean energy conversion.

This special issue aims to widely communicate current research on energy conversion by photocatalysis or electrocatalysis. Original research into the photo- or electrocatalytic degradation of pollutants, production of hydrogen and hydrocarbons, and reduction of nitrogen to ammonia will be welcome. Likewise, we warmly welcome the submission of review articles about related energy conversion.

Potential topics include but are not limited to the following:

- ▶ Photo/electrochemical conversion processes converting atmospheric molecules into higher-value products
- ▶ Photo/electrocatalysts for environmental pollution control and energy conversion
- ▶ Photo/electrocatalytic production of hydrogen and hydrocarbons
- ▶ The reduction of nitrogen to ammonia via photo/electrocatalysts
- ▶ Simulation studies on the effects of widespread use of photo/electrocatalysis

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/ijp/aeeprm/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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