

Special Issue

Recent Advances in Quantum Dots for Environmental Catalysis

Message from the Guest Editor

Photocatalysis, which converts solar energy into reactive oxygen species, is considered to be a promising technology for alleviating environmental pollution and addressing energy issues. Nevertheless, traditional photocatalysts, such as TiO₂ and ZnO, are limited to low solar energy utilization efficiency, slow photogenerated carrier separation rate and fast charge carrier recombination rate. It is of great importance to improve the utilization of solar photons and boost the spatial separation and migration of photoinduced carriers. Carbon quantum dots (CQDs), a kind of zero-dimensional carbon-based nanomaterials, are considered biocompatible organic quantum dots with low toxicity and chemical stability. Additionally, the conjugated bonds in CQDs can promote electron storage and transfer. Therefore, CQDs can be employed to improve the photocatalytic performance of the photocatalyst.

Guest Editor

Dr. Qingsong Hu

College of Environmental Science and Engineering, Yangzhou University, Yangzhou, China

Deadline for manuscript submissions

31 October 2026



Catalysts

an Open Access Journal
by MDPI

Impact Factor 4.0
CiteScore 7.6



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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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