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## Advanced Science and Technology of Photonic Crystals

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### Message from the Guest Editor

Dear Colleagues,

Our Special Issue is focused on recent developments in photonic crystal and applications. Photonic crystal is a promising class of nanomaterials for environmental energy conversion applications. PCs are 1-, 2- and 3-dimensional.

This Special Issue particularly highlights MXenes, a distinct class within the realm of photonic materials. MXene-based photocatalysts have demonstrated superior performance in various photocatalytic applications such as water splitting, CO<sub>2</sub> reduction, and degradation of organic pollutants under visible light irradiation. The unique electronic and structural properties of MXenes, as well as their surface modification capabilities, make them a versatile platform for designing efficient and selective photocatalysts.

This Special Issue aims to provide a comprehensive overview of recent advances in photonic crystal, including their synthesis, characterization, and photocatalytic laser applications.



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# Special Issue



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## Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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