

Special Issue

TiO₂-Based Nanostructures, Composites and Hybrid Photocatalysts

Message from the Guest Editors

Titanium dioxide (TiO₂) is nowadays one of the most widely used photocatalytic materials due to its ability to oxidatively decompose organic pollutants, low cost, durability and corrosion resistance. It has wide applications in the energy and environmental fields. The scope of interests includes but is not limited to the following topics:

- Fundamental properties of TiO₂ nanostructures;
- Synthesis of bulk TiO₂ crystals, TiO₂ nanoparticles and thin films;
- Modification of TiO₂ nanostructures through doping, including non-metal doping and metal doping;
- Self-doped TiO₂ nanostructures: oxygen vacancies, black titania, etc.;
- Composites and hybrid photocatalysts based on TiO₂ and carbon nanomaterials or on TiO₂ and inorganic materials;
- Applications including water remediation, degradation of dyes and/or pharmaceuticals, CO₂ reduction, hydrogen evolution, fuels production, plasmonic photocatalysis, gas sensors, biomedical applications, etc. It is our pleasure to invite you to submit a manuscript for this Special Issue.

Guest Editors

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Deadline for manuscript submissions

closed (30 June 2021)



Materials

an Open Access Journal
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Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed



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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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