



## TiO<sub>2</sub>-Based Nanostructures and Photocatalysts

Guest Editor:

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Deadline for manuscript  
submissions:

**closed (31 December 2020)**

### Message from the Guest Editor

TiO<sub>2</sub> is one of the most studied semiconductor photoactive materials. A wide array of approaches have developed for enhancing the TiO<sub>2</sub> photocatalytic activity, including TiO<sub>2</sub> morphology tuning at a nanoscale level, improving its intrinsic charge mobility, and hindering or decreasing the electron–hole recombination via charge separation through a hetero-interface (combining TiO<sub>2</sub> with graphene-related materials, small molecules, or metal oxides).

This Special Issue will be focused on the recent advances in the development of TiO<sub>2</sub>-based materials, covering both innovative synthesis, specific applications and peculiar electron transport mechanisms. Submissions framed, especially in these following areas, are welcome: 1) TiO<sub>2</sub> nanostructures: synthesis, doping, and modelling; 2) Hybrid TiO<sub>2</sub>/two-dimensional materials (transition metal dichalcogenides and graphene-related materials): synthesis, characterizations, and photocatalytic applications;

3) Application of TiO<sub>2</sub>-based materials and composites for photocatalysis, water remediation, gas sensing, fine chemical production, self-cleaning surfaces, antibacterial activity, and biomedical applications.

