

1. Record Nr.	UNINA9910337916703321
Titolo	Nanophotocatalysis and Environmental Applications : Materials and Technology // edited by Inamuddin, Gaurav Sharma, Amit Kumar, Eric Lichtfouse, Abdullah M. Asiri
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-10609-8
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (343 pages)
Collana	Environmental Chemistry for a Sustainable World, , 2213-7122 ; ; 29
Disciplina	541.395 541.35
Soggetti	Environmental chemistry Green chemistry Nanotechnology Analytical chemistry Catalysis Environmental Chemistry Green Chemistry Analytical Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. Nanostructured imprinted supported photocatalysts: Organic and inorganic matrixes -- 2. Supporting materials for immobilization of nanophotocatalysts -- 3. Non-metals (oxygen, sulfur, nitrogen, boron and phosphorus)-doped metal oxide hybrid nanostructures as highly efficient photocatalysts for water treatment and hydrogen generation -- 4. Challenges of synthesis and environmental applications of metal-free nano-heterojunctions -- 5. Perovskite-based materials for photocatalytic environmental remediation -- 6. Carbon Nitride-A Wonder Photocatalyst -- 7. Graphene and allies as a part of metallic photocatalysts -- 8. Silver-based photocatalysts- a special class -- 9. Green Synthesis of Novel Photocatalysts -- 10. Electrodeposition of Composite Coatings as a Method for Immobilizing TiO2 Photocatalyst -- 11. Spinning Disk Reactor technology in photocatalysis:

nanostructured catalysts intensified production and applications.

---

## Sommario/riassunto

This book serves the environmentalists to track the development of photocatalytic materials and technology in the present context and to explore future trends. Photocatalysis is the most influential greener technology being researched, developed and adopted for the treatment of wastewater. The technological advancements in the area of smart hybrid photocatalytic materials have gained momentum in the present era. The rational designing of photocatalytic materials with a multi-pronged approach opens a new chapter for environmental detoxification. Other important aspects relate to the transfer of this nanostructured photocatalytic technology to real backdrops. Harnessing natural solar energy for energy and environmental roles is another crucial criterion in designing photocatalysts.

---