

1. Record Nr.	UNINA9910557532303321
Autore	Likodimos Vlassios
Titolo	Advanced Photocatalytic Materials
Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021
Descrizione fisica	1 electronic resource (176 p.)
Soggetti	Technology: general issues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Semiconductor photocatalysts have attracted a great amount of multidiscipline research due to their high potential for solar-to-chemical-energy conversion applications, ranging from water and air purification to hydrogen and chemical fuel production. This unique diversity of photoinduced applications has spurred major research efforts on the rational design and development of photocatalytic materials with tailored structural, morphological, and optoelectronic properties in order to promote solar-light harvesting, easy photogenerated electron-hole recombination and the concomitant low quantum efficiency. This book presents a collection of original research articles on advanced photocatalytic materials, synthesized by novel fabrication approaches and/or innovative modifications that improve their performance in target photocatalytic applications such as water (cyanobacterial toxins, antibiotics, phenols, and dyes) and air (NO<sub>x</sub> and volatile organic compounds) pollutant degradation, hydrogen evolution, and hydrogen peroxide production by photoelectrochemical cells.</p>