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Autore	Aràneo, Antonio
Titolo	Chimica analitica qualitativa : metodo periodale / A. Aràneo
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Descrizione fisica	XXIII, 661 p. ; 24 cm.
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Titolo	Photocatalytic Semiconductors : Synthesis, Characterization, and Environmental Applications / / edited by Aracely Hernández-Ramírez, Iliana Medina-Ramírez
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-10999-5
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (298 p.)
Disciplina	537.622 54 541395 620.11
Soggetti	Catalysis Materials science Energy systems Ceramics Glass Composite materials Semiconductors Characterization and Evaluation of Materials Energy Systems

	Ceramics, Glass, Composites, Natural Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Semiconducting materials -- New visible light active semiconductors -- Synthesis methods for photocatalytic materials -- Physicochemical characterization of photocatalytic materials -- Electrochemical characterization of photocatalytic materials -- Semiconductor materials for photocatalytic oxidation of organic pollutants in wastewater -- Application of semiconductor photocatalytic materials for the removal or inorganic compounds from wastewater -- Photocatalytic materials in water disinfection -- Future and perpectives for photocatalytic materials in environmental photocatalysis.
Sommario/riassunto	This critical volume examines the different methods used for the synthesis of a great number of photocatalysts, including TiO2, ZnO, and other modified semiconductors, as well as characterization techniques used for determining the optical, structural and morphological properties of the semiconducting materials. Additionally, the authors discuss photoelectrochemical methods for determining the light activity of the photocatalytic semiconductors by means of measurement of properties such as band gap energy, flat band potential, and kinetics of hole and electron transfer. Photocatalytic Semiconductors: Synthesis, Characterization and Environmental Applications provides an overview of the semiconductor materials from first- to third-generation photocatalysts and their applications in wastewater treatment and water disinfection. The book further presents economic and toxicological aspects in the production and application of photocatalytic materials. This book also: · Provides a broad perspective of semiconductors materials with photocatalytic properties · Emphasizes the importance of the physicochemical and electrochemical characterization of photcatalytic materials · Includes synthesis methods that produce photocatalytic materials with suitable properties for environmental applications.