

1. Record Nr.	UNINA9911119651803321
Titolo	International journal of crashworthiness
Pubbl/distr/stampa	Cambridge, England, : Woodhead Pub., 1996-
ISSN	1754-2111 1573-8965
Soggetti	Automobiles - Crashworthiness Airplanes - Crashworthiness Passive Sicherheit Sicherheitsgerechte Konstruktion Verkehrsunfall Fahrzeug Automobiles - Resistance aux collisions Avions - Resistance aux collisions Periodicals.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Periodico
Note generali	Refereed/Peer-reviewed

2. Record Nr.	UNINA9911154521203321
Autore	Khataee Alireza
Titolo	Nanostructured titanium dioxide materials : properties, preparation and applications / / Alireza Khataee, G. Ali Mansoori
Pubbl/distr/stampa	Hackensack, N.J., : World Scientific, 2012
ISBN	981-4374-73-3
Edizione	[1st ed.]
Descrizione fisica	1 online resource (205 p.)
Altri autori (Persone)	MansooriG. Ali
Disciplina	620.189322
Soggetti	Nanostructured materials Titanium dioxide
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 and index.
Nota di contenuto	Brief Summary; Contents; Chapter 1 - Introduction; Chapter 2 - Properties of Titanium Dioxide and Its Nanoparticles; 2.1. Structural and Crystallographic Properties; 2.2. Photocatalytic Properties of Nanostructured Titanium Dioxide; Chapter 3 - Preparation of Nanostructured Titanium Dioxide and Titanates; 3. 1. Vapor Deposition Method; 3. 2. Solvothermal Method; 3. 3. Electrochemical Approaches; 3. 4. Solution Combustion Method; 3. 5. Microemulsion Technique; 3. 6. Micelle and Inverse Micelle Methods; 3. 7. Combustion Flame-Chemical Vapor Condensation Process; 3. 8. Sonochemical Reactions 3. 9. Plasma Evaporation3. 10. Hydrothermal Processing; 3. 11. Sol-Gel Technology; Chapter 4 - Applications of Nanostructured Titanium Dioxide; 4.1. Dye-Sensitized Solar Cells; 4.2. Hydrogen Production; 4.3. Hydrogen Storage; 4.4. Sensors; 4.5. Batteries; 4.6. Cancer Prevention and Treatment; 4.7. Antibacterial and Self-Cleaning Applications; 4.8. Electrocatalysis; 4.9. Photocatalytic Applications of Titanium Dioxide Nanomaterials; 4.9.1. Pure Titanium Dioxide Nanomaterials; 4.9.2. TiO ₂ -based Nanoclays; 4.9.3. Metal ions and Non-metal Atoms Doped Nanostructured TiO ₂ Chapter 5 - Supported and Immobilized Titanium Dioxide Nanomaterials5.1. Immobilization on Glass Substrates; 5.2. Immobilization on Stone, Ceramic, Cement and Zeolite; 5.3. Immobilization on Metallic and Metal Oxide Materials; 5.4. Immobilization on Polymer Substrates; Discussion and Conclusions;

Sommario/riassunto

During the past decade, research and development in the area of synthesis and applications of different nanostructured titanium dioxide have become tremendous. This book briefly describes properties, production, modification and applications of nanostructured titanium dioxide focusing in particular on photocatalytic activity. The physicochemical properties of nanostructured titanium dioxide are highlighted and the links between properties and applications are emphasized. The preparation of TiO₂ nanomaterials, including nanoparticles, nanorods, nanowires, nanosheets, nanofibers, and nanotubes a
