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| Titolo | Solid state chemistry and photocatalysis of titanium dioxide : special topic volume with invited peer reviewed papers only / / edited by Maria K. Nowotny and Janusz Nowotny |
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| Collana | Diffusion and defect data. Pt. B. Solid state phenomena, , 1012-0394 ; ; volume 162 |
| Altri autori (Persone) | NowotnyMaria K<br>NowotnyJanusz <1936-> |
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| Soggetti | Water - Purification - Photocatalysis<br>Titanium dioxide<br>Electronic books. |
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| Nota di bibliografia | Includes bibliographical references and index. |
| Nota di contenuto | Solid State Chemistry and Photocatalysis of Titanium Dioxide; Foreword; Table of Contents; Molecular Mechanism of Water Oxidation Reaction at Photo-Irradiated TiO2 and Related Metal Oxide Surfaces ; Development of Visible-Light-Driven TiO2 and SrTiO3 Photocatalysts Doped with Metal Cations for H2 or O2 Evolution ; Investigations of Photo-Excited TiO2 Based on Time Resolved Microwave Conductivity and Oxygen Isotopic Exchange; Surface Modified Titania Visible Light Photocatalyst Powders; Titanium Dioxide Photocatalyst - Unresolved Problems<br>Tayloring the Photocatalytical Activity of Anatase TiO2 Thin Film Electrodes by Three-Dimensional Mesoporosity Surface Science Approach to Photochemistry of TiO2; Composite Titanium Dioxide Photocatalysts and the ""'Adsorb & Shuttle"" Approach: A Review ; X-Ray Photoelectron Spectroscopy of Anatase-TiO2 Coated Carbon Nanotubes ; Efficient Photoelectrochemical Splitting of Water to H2 and O2 at Nanocrystalline Carbon Modified (CM)-n-TiO2 Thin Films; Structure-Reactivity Relationships of Anatase and Rutile TiO2 Nanocrystals Measured by In Situ Vibrational Spectroscopy |

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| | Sol-Gel Titania and Titania-Silica Mixed Oxides Photocatalysts An Overview of Semi-Conductor Photocatalysis: Modification of TiO2 Nanomaterials; Controlled Synthesis of Titanium Dioxide Nanostructures; Photocatalytical Properties of TiO2 Nanotubes; Titanium Dioxide Photocatalysts: Performance Related Properties; Keywords Index; Authors Index |
| Sommario/riassunto | The goal of this special volume was to provide a unique opportunity to exchange information, to present the latest results and to review relevant issues affecting contemporary diffusion research. The large number (over 232) of peer-reviewed papers emphasizes the considerable academic and industrial interest in this field. This interesting book offers much food-for-thought concerning the topic. |