Record Nr. UNINA9910809515303321 Autore Sekhar J. A Titolo Innovation in materials science [[electronic resource] /] / edited by J.A. Sekhar and J.P. Dismukes Stafa-Zurich, Switzerland, : Trans Tech Publications Ltd., 2008 Pubbl/distr/stampa **ISBN** 3-03813-184-9 Edizione [1st ed.] Descrizione fisica 1 online resource (250 p.) Collana Key engineering materials, , 1013-9826;; v. 380 Altri autori (Persone) SekharJ. A DismukesJ. P Disciplina 620.11 Soggetti Materials Technological innovations Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia "Special topic volume with invited papers only." Note generali Nota di bibliografia Includes bibliographical references and indexes. Nota di contenuto Innovation in Materials Science; Preface; Table of Contents; Fundamentals: Mathematics and Innovation in Engineering: Invention and Innovation: A Case Study in Metals; Energy and Materials; Wind Energy Electrical Power Generation Industry Life Cycle - Impact of Modern Materials Systems on Economic Viability: Material Innovations in Alternative Energy - Collaboration, Systems and Opportunities: Electronic Materials; Disruptive Inventions in Electroceramics; Transparent Thin Film Transistors Based on InZnO for Flexible **Electronics: Jet Engine Materials** Superalloy Technology - A Perspective on Critical Innovations for Turbine Engines By Leaps and Bounds: The Realization of Jet Propulsion through Innovative Materials and Design; Ophthalmologic Materials; The Property Driven Innovation of Materials for Use in Ophthalmology; Glass; Fluorine Doped Tin Oxide Coatings - Over 50 Years and Going Strong; Wood; Innovations in Wood Science; Commercial Nano-Fibers; Development and Commercialization of Vapor Grown Carbon Nanofibers: A Review; Aluminum; Innovation with Low-Ionization Plasma Sources for Enhanced Aluminum Processing: Iron Redemption of Microscale Mill Waste into Commercial Nanoscale Asset Keywords Index; Authors Index

""Scientific technology"" has progressively displaced ""empirical

technology"" as the primary driver and basis for increasing economic

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development over the last four centuries. The integration of the power technologies developed during the 17th - 19th Centuries, with the mechanization of thought developed in the 20th Century, has increased the scale and efficiency of formal inventive and innovation processes as the key sources of wealth creation by innovation. In the present work, emphasis is placed on some key innovations specific to the Materials Science that has exerted such a profound