

1. Record Nr.	UNINA9910163994103321
Titolo	Characterization of Minerals, Metals, and Materials 2017 // edited by Shadia Ikhmayies, Bowen Li, John S. Carpenter, Jian Li, Jiann-Yang Hwang, Sergio Neves Monteiro, Donato Firrao, Mingming Zhang, Zhiwei Peng, Juan P. Escobedo-Diaz, Chenguang Bai, Yunus Eren Kalay, Ramasis Goswami, Jeongguk Kim
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-51382-6
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (XXIX, 872 p. 480 illus.)
Collana	The Minerals, Metals & Materials Series, , 2367-1696
Disciplina	620.11
Soggetti	Materials - Analysis Building materials Materials Characterization and Analytical Technique Structural Materials Materials Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Part 1: Soft Materials -- Charpy Toughness Behavior of Figue Fabric Reinforced Polyester Matrix Composites -- Comparative Analysis of Curaua Fiber Density Using the Geometric Characterization and Pycnometry Technique -- Izod impact tests in polyester matrix composites reinforced with blanket of the malva and jute fibers -- Tensile Behavior of Epoxy Matrix Composites Reinforced With Eucalyptus Fibers -- The dimensional characterization of jute fabric strips for reinforcement in composite polymeric -- Izod Toughness Behavior of Continuous PALF Fibers Reinforced Polyester Matrix Composites -- Mechanical, thermal, morphology and barrier properties of flexible film based on polyethylene-ethylene vinyl alcohol blend reinforced with graphene oxide -- Radiation Effects on Crosslinking of Butyl Rubber Compounds -- Part 2: Clays and Ceramics -- Effect of Skin-Core Hierarchical Structure on Dielectric Constant of Injection

Molded and Cast Film Extruded Liquid Crystalline Polymer -- Aging behaviour in  $\text{Ni}_{0.5}\text{Co}_x\text{Mn}_{2.5-x}\text{O}_4$  ( $x=0.5, 0.8$  and  $1.1$ ) thermistors -- Adsorption of lead from aqueous solutions to bentonite and composite -- Part 3: Electronic, Magnetic, Environmental, and Advanced Materials -- Characterization Of Low-Zinc Electric Arc Furnace Dust -- GAMMA-RADIATION EFFECT ON BIODEGRADABILITY OF SYNTHETIC PLA STRUCTURAL FOAMS PP/HMSPP BASED -- STUDY OF FLEXIBLE FILMS PREPARED FROM PLA/PBAT BLEND AND PLA e-BEAM IRRADIATED AS COMPATIBILIZING AGENT -- Synthesis of ZnO Micro Prisms on Glass Substrates by the Spray Pyrolysis Method -- Part 4: Nano Materials -- Electrical and microstructural investigation of  $\text{Ni}_{0.5}\text{Co}_{0.5}\text{Cu}_{0.3}\text{Zn}_{0.3}\text{Mn}_{1.4}\text{O}_4$  temperature sensors -- Enhanced physical properties of thin film nanocomposites -- A study on the size and type of inclusions in Si-Mn combined deoxidated low carbon steel strip -- Effect of Argon Gas Purging of Spark Plasma Sintered  $\text{ZrB}_2+\text{SiC}$  Nano-powder Composites -- Part 5: Alloys -- Investigating the Anisotropic Behaviour of Lean Duplex Stainless Steel 2101 -- MICROSTRUCTURAL INVESTIGATION AND IMPACT TESTING OF ADDITIVE MANUFACTURED Ti-6Al-4V -- Part 6: Powders and Foams -- SYNTHESIS OF TiN NANO-COMPOSITE POWDER BY HIGH-ENERGY BALL MILLING OF  $\text{TiH}_2$  UNDER NITROGEN ATMOSPHERE -- Application of AFM in Morphology Determination of Powder Material -- Effects of Thermal Processing on Closed-Cell Aluminium Foams -- Experimental Investigation of Mechanical Behaviour of Closed-Cell Aluminium Foams under Drop Weight Impact -- Deformation Mechanisms of Closed Cell-Aluminium Foams during Drop Weight Impact -- Part 7: Minerals -- INDUSTRIAL USE OF BRAZILIAN BENTONITE MODIFIED BY MILD ACID ATTACK -- Mullitization Characteristics and Sinterability of Kyanite in Ceramic Preparation -- Ore Dressing and Technological characterization of Palygorskite from Piauí/Brazil for applications as adsorbent of heavy metals -- TECHNOLOGICAL CHARACTERIZATION OF WASTE FROM GOLD MINING DAM -- Synthesis and Characterization of Sodalite and Cancrinita from Kaolin -- Part 8: Ferrous Metals -- Effects of Alumina and Magnesia on Microstructure and Mineralogy of Iron Ore Sinter -- Isothermal Reduction Kinetics of  $\text{CaO}\cdot 2\text{Fe}_2\text{O}_3$  by Thermogravimetric Analysis -- Phase Transformation of  $\text{MnO}_2$  and  $\text{Fe}_2\text{O}_3$  Briquettes Roasted Under  $\text{CO-CO}_2$  Atmospheres -- Contact Angle of Iron Ore Particles with Water: Measurements and Influencing Factors -- Important Factors to Consider in FIB Milling of Crystalline Materials -- Part 9: Material Processing and Corrosion -- Corrosion Behavior of Super-Ferritic Stainless Steels in NaCl media -- Effect of bromide ions on the pitting corrosion of hafnium in anhydrous t-butanol and acetonitrile -- Compression Behavior of Semi-Closed Die Forged AZ80 Extrusion -- Nondestructive Characterization of Microstructures of Heat-Treated Steels by Magnetic Barkhausen Noise Technique -- Part 10: Method Development -- Development of A New Recycling Process of PGM from Metal-supported Catalyst Using Complex Oxide -- Part 11: Composites -- High thermal conducting composites using percolation theory -- SORPTION CHARACTERISTICS OF LOW DENSITY POLYETHYLENE/KOLA NUT COMPOSITE -- Residual Stress Analysis within Steel Encapsulated Metal Matrix Composites Via Neutron Diffraction -- Tensile Behavior of Epoxy Matrix Composites Reinforced With Pure Ramie Fabric -- Hemp Fiber Density Using the Pycnometer Technique -- Preparation and Characterization of Clay Exfoliation and Vegetal fibre on Properties of Recycled Low Density Polyethylene (rLDPE) -- Part 12: Ferrous Metals -- Estimation of Dislocation Density in Metals from Microhardness Test -- Part 13: Welding and Solidification -- Interfacial strength characterization in a high-modulus

low-density steel-based Fe-TiB<sub>2</sub> composite -- Part 14: Materials  
 Extractions -- Leaching of Copper-Cobalt Tailings from the Democratic  
 Republic of Congo -- OPTIMUM OPERATING CONDITIONS FOR  
 EXTRACTION OF LIGNIN PRECURSORS FROM PALM FRUIT BUNCH --  
 SELECTION ON THE PROCESS FOR ENRICHING GOLD FROM REFRACTORY  
 GOLD ORES BY SMELTING -- SELECTION ON THE PROCESS FOR  
 REMOVING AND RECOVERING ANTIMONY FROM ANTIMONIAL  
 REFRACTORY GOLD ORES -- Upgrading of Copper and Cobalt from the  
 Democratic Republic of Congo Tailings -- CHARACTERIZATION OF  
 SPENT PRINTED CIRCUIT BOARDS FROM COMPUTERS -- Study of the  
 Effect of the Initial Nucleation Mechanism of Lead Anode Oxidation Film  
 on Internal Stress in Chromic Acid Electrolyte -- Part 15: Poster Session  
 -- Addition of Cellulose Nanofibers in Reactive Powder Concrete --  
 ADVANCED ION COLUMN SOLUTION FOR LOW ION DAMAGE  
 CHARACTERIZATION AND ULTRA-FINE PROCESS -- Application of  
 Membrane Separation Technology in Wastewater Treatment of Iron and  
 Steel Enterprise -- Brillouin Scattering Study on Elastic Properties of  
 Bulk hcp ZnO Single Crystal -- Characteristics of stamp charging coke  
 and top charging coke -- Characterization and leaching proposal of Ag  
 (I) from a Zn concentrate -- Characterization and Mechanical  
 Properties of Additively Manufactured Stainless Steel 316L --  
 CHARACTERIZATION OF MERCURY JAROSITE -- Characterization of steel  
 production dust and their use in structural ceramics -- CHARPY  
 TOUGHNESS BEHAVIOR OF JUTE FABRIC REINFORCED POLYESTER  
 MATRIX COMPOSITES -- Chemical and Mineralogical Characterization of  
 a Mixed Sulphide Ore at Zimapan, Hidalgo -- Contribution to the  $\beta$   
 relaxation study of the HDPE, LDPE and LLDPE -- Determination of Ten  
 Impurity Elements in Tin Concentrate and Smelting Products by ICP-AES  
 -- Effects of wet grinding on the structure and granularity of biological  
 origin aragonite and its polymorphic transformation into calcite --  
 EVALUATION OF BALLISTIC ARMOR BEHAVIOR WITH EPOXY COMPOSITE  
 REINFORCED WITH MALVA FIBERS -- EVALUATION OF THE POZZOLANIC  
 ACTIVITY OF RESIDUE FROM THE PAPER INDUSTRY -- EVALUATION OF  
 THE PROPERTIES OF THE ADHESIVE MORTAR IN THE FRESH STATE WITH  
 ADDITION OF GLASS WASTE -- Experimental Evaluation of the Influence  
 of Mortar's Mechanical Properties on The Behavior of Clay Masonry --  
 Influence of Operation Conditions on Normal Stress and Flow Pattern of  
 Burden Materials in Blast Furnace Based on Discrete Element Method --  
 Polymer Blend based on recycled polyethylene and ethylene vinyl  
 acetate copolymers reinforced with natural fibers from agricultural  
 wastes -- Preliminary study of the effect of stirring rate, temperature  
 and oxygen pressure on the leach rate of copper powder, generated by  
 grinding of printed circuit boards of computer -- Preparation and  
 Characterization of Polyethylene Nanocomposites with Clay and Silver  
 Nanoparticles -- Production of concrete interlocking blocks with partial  
 replacement of sand in bulk by waste glass machined -- Reactive  
 Powder Concrete Production with the Addition of Granite Processing  
 Waste -- Research on the reason of the different type of chloride  
 forming in the process of blast furnace ironmaking -- Stress and  
 Deformation Analysis of Hot Blast Stove Piping System -- Stress and  
 Deformation Analysis of Top Combustion Hot Blast Stove Shell --  
 STUDY OF CALCINED MIXTURES FROM INDUSTRIAL RESIDUES FOR  
 PRODUCTION OF AGGLOMERATES.-STUDY OF SYNERGISTIC EFFECT OF  
 LIGHT STABILIZER ADDITIVE, CONVENTIONAL AND NANOPARTICLES,  
 APPLIED TO POLYETHYLENE FILMS SUBMITTED TO ULTRAVIOLET  
 RADIATION -- Study of the effect of surface liquid flow during column  
 flotation of mining tailing of the Dos Carlos dam -- STUDY ON  
 BENDING TEST ON CONCRETE STRUCTURAL USE CRUMB RUBBER AS

SUBSTITUTE IN FINE AGGREGATE -- Synthesis and structural characterization of BaTiO<sub>3</sub> doped with Gd<sup>3+</sup> -- Texture analysis and anisotropic properties of a rolled CuZn36 brass alloy -- The influence of titanium content on the sinter ore phase structure and the crack -- The use of Network Simplex method for planning the incorporation of recycled paper mill sludge in manufacturing of ceramic bodies -- USE OF ALKALINE SOLID WASTES FROM KRAFT PULP AND PAPER MILLS, DREGS AND GRITS IN CEMENT PRODUCTION -- Wood-to-concrete joints using steel connectors: experimental evaluation.

---

Sommario/riassunto

This collection gives broad and up-to-date results in the research and development of materials characterization and processing. Coverage is well-rounded from minerals, metals, and materials characterization and developments in extraction to the fabrication and performance of materials. In addition, topics as varied as structural steels to electronic materials to plant-based composites are explored. The latest research presented in this wide area make this book both timely and relevant to the materials science field as a whole. The book explores scientific processes to characterize materials using modern technologies, and focuses on the interrelationships and interdependence among processing, structure, properties, and performance of materials. Topics covered include ferrous materials, non-ferrous materials, minerals, ceramics, clays, soft materials, method development, processing, corrosion, welding, solidification, composites, extraction, powders, nanomaterials, advanced materials, and several others.

---