

1. Record Nr.	UNINA9910961544203321
Titolo	Zirconium : characteristics, technology and performance // Lucy M. King and Kathy E. Allen, editors
Pubbl/distr/stampa	Hauppauge, N.Y., : Nova Science Publishers, c2012
ISBN	1-62081-503-6
Edizione	[1st ed.]
Descrizione fisica	1 online resource (152 p.)
Collana	Chemical engineering methods and technology Materials science and technologies
Altri autori (Persone)	KingLucy M AllenKathy E
Disciplina	669/.735
Soggetti	Zirconium
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	Intro -- ZIRCONIUM -- ZIRCONIUM -- CONTENTS -- PREFACE -- PREPARATION OF ZIRCONIUM OXIDE THIN FILM BY PLASMA COATING METHOD AND ITS HYDROPHOBIC NATURE -- ABSTRACT -- 1. INTRODUCTION -- 2. DUAL FREQUENCY PLASMA SPUTTERING METHOD FOR ZIRCONIUM OXIDE THIN FILM -- 2.1. XRD Pattern and XPS Analysis of the Prepared ZrO ₂ Thin Film -- 2.2. Water Contact Angle of the Prepared ZrO ₂ Thin Film -- 3. EFFECT OF ION BOMBARDMENT ON ZIRCONIUM OXIDE THIN FILM BY DUAL FREQUENCY PLASMA SPUTTERING -- 3.1. Ion flux -- 3.2. Deposition Rate of the Prepared ZrO ₂ Thin Films -- 3.3. Hardness of the Prepared ZrO ₂ Thin Films -- 3.4. Water Contact Angle of the Prepared ZrO ₂ Thin Films -- 4. IMPROVEMENT OF A DUAL FREQUENCY SPUTTERING DEVICE FOR HIGHER DEPOSITION RATES OF PROTECTIVE ZIRCONIUM OXIDE FILMS -- 4.1. Influence of Geometry -- 4.2. Influence of RF Power and O ₂ Gas Mixture Ratio -- 4.3. Transparency of the Deposited Zirconium Oxide Thin Films -- CONCLUSION -- REFERENCES -- CELLULOSE FIBERS COATED ZIRCONIUM OXIDE: CHARACTERISTICS, TECHNOLOGY AND PERFORMANCE -- ABSTRACT -- INTRODUCTION -- CELLULOSE FIBERS FROM SUGARCANE BAGASSE -- ZIRCONIUM OXIDE -- NANOCOMPOSITES CELLULOSE FIBERS COATED ZIRCONIUM OXIDE -- CHARACTERISTICS OF CELLULOSE FIBERS COATED ZIRCONIUM OXIDE ON PHYSICAL AND CHEMICAL PROPERTIES -- TECHNOLOGY AND

PERFORMANCE OF CELLULOSE FIBERS COATED ZIRCONIUM OXIDE ON PHYSICAL AND CHEMICAL PROPERTIES -- REFERENCES -- ZIRCONIUM AND POTASSIUM PROMOTED COBALT MOLYBDENUM CARBIDE AS AN ACTIVE WATER-GAS SHIFT CATALYST -- ABSTRACT -- INTRODUCTION -- EXPERIMENTAL -- Catalysts Preparation -- Activity Measurement -- Characterization -- RESULTS AND DISCUSSION -- Highly Active Como Catalysts by Addition of Alkalis, Lanthanide and Zirconium -- Alkalis and Lanthanide Metal-Added Alumina/CoMo Carburized Catalysts. Zirconium and Potassium Promoted Alumina/CoMo Carburized Catalysts -- Surface Properties and XRD Patterns of Various CoMo Carbides -- STEM Image -- The Effect of Potassium and Zirconium Addition Based on H₂18O-Adsorbed TPD -- Surface Species of Promoted Como Catalysts Based on XPS -- CONCLUSION -- REFERENCES -- MODIFICATION EFFECTS ON ELECTRICAL AND DIFFUSIVE PARAMETERS FOR DIFFERENT ZIRCONIUM-BASED PERMSELECTIVE SYSTEMS -- ABSTRACT -- 1. INTRODUCTION -- 2. EXPERIMENTAL -- 2.1. Materials -- 2.2. Concentration Potential and Impedance Spectroscopy Measurements -- 2.3. Streaming Potential Measurements -- 3. RESULTS AND DISCUSSION -- CONCLUSION -- ACKNOWLEDGMENTS -- REFERENCES -- ZIRCONIA AND ALLUMINA BIOCERAMIC BIOCOMPATIBILITY -- ABSTRACT -- INTRODUCTION -- ALUMINA -- ZIRCONIA -- BIOMEDICAL USE OF ZIRCONIA -- ZIRCONIA TOUGHENED ALUMINA -- BIOCOMPATIBILITY -- IN VITRO TESTS -- IN VIVO TESTS -- CARCINOGENICITY -- CONCLUSION -- REFERENCES -- PREPARATION AND PROPERTIES OF ZIRCONIA NANOCRYSTALLINE CERAMICS -- ABSTRACT -- 1. INTRODUCTION -- 1.1. Advanced Forming Technology -- 1.2. Ceramic Nanocomposites -- 1.3. Near-Net Shaping Process of Nanoceramics -- 1.4. Tribological Properties of Nanoceramics -- 2. EXPERIMENTAL METHODOLOGY -- 2.1. Powder Preparation and Characterization -- 2.2. Pellet Characterization -- 2.3. Performance Test -- 3. PREPARATIONS OF Y-TZP NANOCERAMICS BY GELCASTING-PRESSING METHOD [6] -- 4. EFFECT OF DOPANT ON DENSIFICATION OF Y-TZP NANOCERAMICS [15-17] -- 5. NEAR-NET PROCESS OF THE Y-TZP BASED NANOCERAMICS [19,21] -- 6. TRIBOLOGICAL PROPERTIES OF Y-TZP BASED NANOCERAMICS -- 6.1. Influence of Grain Size on Tribological Properties -- 6.2. Influence of the Additive on Tribological Properties -- ACKNOWLEDGMENTS -- REFERENCES -- INDEX.

Sommario/riassunto

In this work, the authors present current research in the study of the characteristics, technology and performance applications of zirconium. The topics discussed include the preparation of zirconium oxide thin film by plasma coating method and its hydrophobic nature; cellulose fibres coated zirconium oxide; and much more.
