1. Record Nr. UNINA9910462418503321

Autore	Borm Steffen
Titolo	Numerical methods for eigenvalue problems [[electronic resource] /] / by Steffen Borm, Christian Mehl
Pubbl/distr/stampa	Berlin ; ; Boston, : De Gruyter, c2012
ISBN	1-283-85759-6 3-11-025037-3
Descrizione fisica	1 online resource (216 p.)
Collana	De Gruyter graduate lectures
Classificazione	SK 910
Altri autori (Persone)	MehlChristian <1968->
Disciplina	512.9/436
Soggetti	Eigenvalues Eigenvectors Matrices - Data processing Electronic books.
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	Front matter -- Preface -- Contents -- Chapter 1. Introduction -- Chapter 2. Existence and properties of eigenvalues and eigenvectors -- Chapter 3. Jacobi iteration -- Chapter 4. Power methods -- Chapter 5. QR iteration -- Chapter 6. Bisection methods -- Chapter 7. Krylov subspace methods for large sparse eigenvalue problems -- Chapter 8. Generalized and polynomial eigenvalue problems -- Bibliography -- Index
Sommario/riassunto	Eigenvalues and eigenvectors of matrices and linear operators play an important role when solving problems from structural mechanics and electrodynamics, e.g., by describing the resonance frequencies of systems, when investigating the long-term behavior of stochastic processes, e.g., by describing invariant probability measures, and as a tool for solving more general mathematical problems, e.g., by diagonalizing ordinary differential equations or systems from control theory. This textbook presents a number of the most important numerical methods for finding eigenvalues and eigenvectors of matrices. The authors discuss the central ideas underlying the different algorithms and introduce the theoretical concepts required to analyze their behavior with the goal to present an easily accessible introduction

		to the field, including rigorous proofs of all important results, but not a complete overview of the vast body of research. Several programming examples allow the reader to experience the behavior of the different algorithms first-hand. The book addresses students and lecturers of mathematics, physics and engineering who are interested in the fundamental ideas of modern numerical methods and want to learn how to apply and extend these ideas to solve new problems.
2.	Record Nr.	UNINA9910140742203321
	Titolo	Ceramic materials and components for energy and environmental applications [[electronic resource]] : a collection of papers presented at the 9th International Symposium on Ceramic Materials for Energy and Environmental Applications and the Fourth Laser Ceramics Symposium, November 10-14, 2008, Shanghai, China / / edited by Dongliang Jiang ... [et al.]
	Pubbl/distr/stampa	Hoboken, NJ, : Wiley, c2010
	ISBN	1-282-70778-7 9786612707780 0-470-64084-7 0-470-64083-9
	Descrizione fisica	1 online resource (680 p.)
	Collana	Ceramic transactions ; ; 210
	Altri autori (Persone)	JiangDongliang
	Disciplina	300 620.14
	Soggetti	Ceramic materials Ceramic materials - Environmental aspects Electronic books.
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	"American Ceramic Society".
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Ceramic Materials and Components for Energy and Environmental Applications; Contents; Preface; Acknowledgements; I. Basic Science, Design, Modeling and Simulation; FRACTURE STATISTICS OF SMALL SPECIMENS; STRUCTURE AND PROPERTY OF Ti-Al-C/TiB2 COMPOSITE

CERAMICS; THE EFFECT OF DOPED SINTERING AIDS FOR Nd(Mg0.5Ti0.5) O3 MICROWAVE DIELECTRIC CERAMICS PROPERTIES; MICROWAVE DIELECTRIC PROPERTIES OF (1 -x)(Mg0.6Zn0.4)0.95Co0.05TiO3 CERAMIC SYSTEM; OXYNITRIDE GLASSES: EFFECTS OF COMPOSITION ON GLASS FORMATION AND PROPERTIES WITH IMPLICATIONS FOR HIGH TEMPERATURE BEHAVIOUR OF SILICON NITRIDE CERAMICS
THE HYDROLYSIS OF ALUMINIUM NITRIDE: A PROBLEM OR AN ADVANTAGEPREPARATION AND COMPARISION OF TWO TYPICAL CVD FILMS FROM CH4 AND C3H6 AS CARBON RESOURCES; KINETIC INVESTIGATION ON THE DEPOSITION OF SiC FROM METHYLTRICHLOROSILANE AND HYDROGEN; II. Nanomaterials and Nanotechnologies; SYNTHESIS OF HEMATITE-ZIRCON-SILICA NANO COMPOSITE AS A NON TOXIC CERAMIC PIGMENT BY SOL-GEL METHOD; FORMATION OF NANOCRYSTALLINE -ALUMINAS IN DIFFERENT MORPHOLOGY FROM GEL POWDER AND BOEHMITE POWDER: A COMPARATIVE STUDY; SYNTHESIS AND IN VITRO RELEASE OF GENTAMICIN FROM CaMCM-41/PLLA COMPOSITE MICROSPHERES
HIGHLY ORDERED CUBIC MESOPOROUS COBALT OXIDE BY AN ACCURATELY CONTROLLED INCIPIENT WETNESS TECHNIQUEPREPARATION OF Fe3O4 NANOPARTICLES BY TWO DIFFERENT METHODS; NANO-ZIRCONIA/MULLITE COMPOSITE CERAMICS PREPARED BY IN-SITU CONTROLLED CRYSTALLIZATION FROM THE Si-Al-Zr-O AMORPHOUS BULK; PREPARATION AND CHARACTERIZATION OF Er:Gd2O3 POWDERS; III. Ceramics in Energy Conversion Systems; CMC MATERIALS AND BIOMORPHIC SiSiC FOR ENERGY APPLICATIONS; CRYSTALLIZATION, MICROSTRUCTURE AND PHYSICAL PROPERTY OF NEW TYPES OF BOROSILICATE GLASS-CERAMICS A STUDY OF Al2O3 AND YSZ CERAMIC SUPPORTS FOR PALLADIUM MEMBRANESYNTHESIS OF OLIVINE (LiFePO4) and Ni/OLIVINE (LiFePO4) CATALYSTS FOR UPGRADING SYN-GAS PRODUCTION; FABRICATION AND CHARACTERIZATION OF CERMET MEMBRANE FOR HYDROGEN SEPARATION; POROUS CERAMICS FOR HOT GAS CLEANING; DEGRADATION MECHANISMS OF SiC-BASED FILTERS CAUSED BY LONG TERM WATER VAPOUR EXPOSURE; IV. Solid Oxide Fuel Cells (SOFCs): Materials and Technologies; DEVELOPMENT OF NANO-STRUCTURED YSZ ELECTROLYTE LAYERS FOR SOFC APPLICATIONS VIA SOL-GEL ROUTE
DEVELOPMENT OF SINGLE-CHAMBER SOLID OXIDE FUEL CELLS: PERFORMANCE OPTIMIZATION AND MICRO-STACK DESIGNSDEVELOPMENT OF BUNDLE/STACK FABRICATION TECHONOLOGY FOR MICRO SOFCS; AN OVERVIEW OF SCANDIA STABILIZED ZIRCONIA ELECTROLYTE DEVELOPMENT FOR SOFC APPLICATION; FABRICATION OF Ni-GDC ANODE SUBSTRATE BY TAPE CASTING PROCESS; V. Ceramics in Environmental Applications; INFLUENCE OF LAITICE STRAIN ON THE Ce0.5Zr0.5O2 AND Al2O3 DOPED Ce0.5Zr0.5O2 CATALYTIC POWDERS; MICROSTRUCTURE AND PROPERTIES OF CORDIERITE-BONDED POROUS SiC CERAMICS PREPARED BY IN SITU REACTION BONDING
FABRICATION OF LIGHTWEIGHT CLAY BRICKS FROM RECYCLED GLASS WASTES

Sommario/riassunto

This volume of the Ceramic Transactions series compiles a number of papers presented at the 9th International Conference on Ceramic Materials and Components for Energy and Environmental Applications (9th CMCEE) in Shanghai, China and was the continuation of a series of international conferences held all over the world over the last three decades. This volume contains selected peer reviewed papers from more than 300 presentations from all over the world. The papers in this volume also highlight and emphasize the importance of synergy

between advanced materials and componen