

1. Record Nr.	UNISOBE600200009473
Titolo	Saga di Gautrekr / Postfazione e cur. Massimiliano Bampi
Pubbl/distr/stampa	Milano, : Iperborea, 2004
Descrizione fisica	112 p. ; 20 cm
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia
2. Record Nr.	UNINA9910451314703321
Titolo	Catalysis by ceria and related materials [[electronic resource] /] / edited by Alessandro Trovarelli
Pubbl/distr/stampa	London, : Imperial College Press, c2002
ISBN	1-86094-965-7
Descrizione fisica	1 online resource (527 p.)
Collana	Catalytic science series ; ; v. 2
Altri autori (Persone)	TrovarelliAlessandro
Disciplina	541.3/95
Soggetti	Cerium oxides Catalysis 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	CONTENTS ; Preface ; 1. Mining, Production, Application and Safety Issues of Cerium-based Materials; 1.1. Mining ; 1.2. Production and Application ; 1.3. Safety Issues ; 1.4. References ; 2. Structural Properties and Nonstoichiometric Behavior of CeO ₂ ; 2.1. Structural Properties ; 2.2. Defect Structure Analysis ; 2.3. Transport Properties 2.4. References based Materials 3. Synthesis and Modification of Ceria- ; 3.1.

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Sommario/riassunto

The use of CeO₂-based materials in catalysis has attracted considerable attention in recent years, particularly in applications like environmental catalysis, where ceria has shown great potential. This book critically reviews the most recent advances in the field, with the focus on both fundamental and applied issues. The first few chapters cover structural and chemical properties of ceria and related materials, i.e. phase stability, reduction behaviour, synthesis, interaction with probe molecules (CO, O₂, NO), and metal-support interaction - all presented from the viewpoint of catalytic appl
