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Titolo	Advanced catalytic materials // edited by Ashutosh Tiwari and Salam Titinchi
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ISBN	1-118-99893-6 1-118-99895-2 1-119-14590-2
Descrizione fisica	1 online resource (470 p.)
Collana	Advanced material series
Classificazione	TEC021000
Disciplina	660/.2995
Soggetti	Catalysts
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I. Nanocatalysts - architecture and design -- Part II. Organic and iorganic catalytic transformations -- Part III. Functional catalysis : fundamentals and applications.
Sommario/riassunto	"The subject of advanced materials in catalysis brings together recent advancements in materials synthesis and technologies to the design of novel and smart catalysts used in the field of catalysis. Nanomaterials in general show an important role in chemical processing as adsorbents, catalysts, catalyst supports and membranes, and form the basis of cutting-edge technology because of their unique structural and surface properties. Advanced Catalytic Materials is written by a distinguished group of contributors and the chapters provide comprehensive coverage of the current literature, up-to-date overviews of all aspects of advanced materials in catalysis, and present the skills needed for designing and synthesizing advanced materials. The book also showcases many topics concerning the fast-developing area of materials for catalysis and their emerging applications. The book is divided into three parts: Nanocatalysts - Architecture and Design; Organic and Inorganic Catalytic Transformations; and Functional Catalysis: Fundamentals and Applications. Specifically, the chapters discuss the following subjects: [bullet] Environmental applications of

multifunctional nanocomposite catalytic materials [bullet]
Transformation of nanostructured functional precursors using soft
chemistry [bullet] Graphenes in heterogeneous catalysis [bullet] Gold
nanoparticles-graphene composites material for catalytic application
[bullet] Hydrogen generation from chemical hydrides [bullet] Ring-
opening polymerization of poly(lactic acid) [bullet] Catalytic
performance of metal alkoxides [bullet] Cycloaddition of CO₂ and
epoxides over reusable solid catalysts [bullet] Biomass derived fine
chemicals using catalytic metal bio-composites [bullet] Homoleptic
metal carbonyls in organic transformation [bullet] Zeolites: smart
materials for novel, efficient, and versatile catalysis [bullet] Optimizing
zeolitic catalysis for environmental remediation"--
