

1. Record Nr.	UNINA9910813034503321
Titolo	Nanocatalysis : synthesis and applications // edited by Vivek Polshettiwar, Tewodros Asefa
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2013
ISBN	1-118-60980-8 1-118-60981-6 1-118-61093-8
Edizione	[1st ed.]
Descrizione fisica	1 online resource (753 p.)
Altri autori (Persone)	AsefaTewodros PolshettiwarVivek
Disciplina	660/.2995
Soggetti	Catalysts - Industrial applications Catalysts Nanostructured materials - Industrial applications Nanostructured materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Published simultaneously in Canada".
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction / Vivek Polshettiwar -- Nanocatalysts for the Heck Coupling Reactions / Tewodros Asefa -- Nanocatalysts for the Suzuki Coupling Reactions / Liane M. Rossi -- Sonogashira Reactions Using Nano-Catalysts / Carmen Najera -- Nanocatalysts for Hiyama, Stille, Kumuda and Nigeshi C-C Coupling Reactions / Robert W.J. Scott -- Nanocatalysts for Rearrangement Reactions / Victorio Cadierno -- Oxidation of Alcohols Using Nano-Catalysts / Kiyotomi Kaneda -- Tuning the Morphology of Metal Oxides for Catalytic Applications / Wenjie Shen -- Nanocatalysts for Hydrogenation Reactions / Radha Narayanan -- Hydrogenolysis Reactions using Nanocatalysts / Vivek Polshettiwar -- Nanomaterials Based Photocatalysts / Deepa Khushalani -- Nanocatalysts for Water Splitting / Lianzhou Wang -- Properties of Nano-Catalytic Materials for Hydrogen Production from Renewable Resources / Xianqin Wang -- Nano-Catalysts for Biofuels / Vitaliy Budarin -- Nano-Material Based Bio-Catalyst / Jin Hyung Lee -- Role of Nanocatalysis in Chemical Industry / Rajiv Kumar -- Nanocatalysis : Activation of Small Molecules and Conversion into Useful Feedstock /

Balaji R. Jagirdar.

---

Sommario/riassunto

Exhibiting both homogeneous and heterogeneous catalytic properties, nanocatalysts allow for rapid and selective chemical transformations, with the benefits of excellent product yield and ease of catalyst separation and recovery. This book reviews the catalytic performance and the synthesis and characterization of nanocatalysts, examining the current state of the art and pointing the way towards new avenues of research. Moreover, the authors discuss new and emerging applications of nanocatalysts and nanocatalysis, from pharmaceuticals to fine chemicals to renewable energy to biotransformations.

---