

1. Record Nr.	UNINA9911020361403321
Titolo	Catalysis without precious metals / / edited by R. Morris Bullock
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, 2010
ISBN	9786612712418 9783527632404 3527632409 9781282712416 1282712411 9783527631582 3527631585 9783527631599 3527631593
Descrizione fisica	1 online resource (310 p.)
Classificazione	540
Altri autori (Persone)	BullockR. Morris
Disciplina	541.395
Soggetti	Catalysis Chemistry, Physical and theoretical
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Catalysis Without Precious Metals; Contents; Preface; List of Contributors; 1: Catalysis Involving the H Transfer Reactions of First-Row Transition Metals; 2: Catalytic Reduction of Dinitrogen to Ammonia by Molybdenum; 3: Molybdenum and Tungsten Catalysts for Hydrogenation, Hydrosilylation and Hydrolysis; 4: Modern Alchemy: Replacing Precious Metals with Iron in Catalytic Alkene and Carbonyl Hydrogenation Reactions; 5: Olefin Oligomerizations and Polymerizations Catalyzed by Iron and Cobalt Complexes Bearing Bis(imino)pyridine Ligands 6: Cobalt and Nickel Catalyzed Reactions Involving C-H and C-N Activation Reactions7: A Modular Approach to the Development of Molecular Electrocatalysts for H ₂ Oxidation and Production Based on Inexpensive Metals; 8: Nickel-Catalyzed Reductive Couplings and Cyclizations; 9: Copper-Catalyzed Ligand Promoted Ullmann-

typeCoupling Reactions; 10: Copper-Catalyzed Azide-Alkyne
Cycloaddition (CuAAC); 11: "Frustrated Lewis Pairs" : A Metal-Free
Strategy for Hydrogenation Catalysis; Index

Sommario/riassunto

Written for chemists in industry and academia, this ready reference and handbook summarizes recent progress in the development of new catalysts that do not require precious metals. The research thus presented points the way to how new catalysts may ultimately supplant the use of precious metals in some types of reactions, while highlighting the remaining challenges. An essential companion for organic and catalytic chemists, as well as those working with/on organometallics and graduate students. From the contents: * Catalysis Involving the H⁺ Transfer Reactions of First-Row Tran
