1. Record Nr. UNINA9910822003103321

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Titolo	Catalytic methods in asymmetric synthesis : advanced materials, techniques, and applications / / edited by Michelangelo Gruttadauria, Francesco Giacalone
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, 2011
ISBN	9786613203946 9781283203944 1283203944 9781118087985 1118087984 9781118087992 1118087992 9781118087978 1118087976
Edizione	[1st ed.]
Descrizione fisica	1 online resource (722 p.)
Classificazione	SCI013040
Altri autori (Persone)	GruttadauriaMichelangelo GiacaloneFrancesco
Disciplina	541/.395
Soggetti	Asymmetric synthesis Catalysis
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	Machine generated contents note: Part I. New materials and technologies: supported catalysts, supports, self-supported catalysts, chiral ionic liquid, supercritical fluids, flow reactors and microwaves.1. Recyclable stereoselective catalysts (Carlos M. Monteiro, Alexandre F. Trindale, Pedro M. P. Gois and Carlos A. M. Afonso).2. Recyclable organocatalysts in asymmetric reactions (Michelangelo Gruttadauria, Francesco Giacalone and Renato Noto).3. Synthesis and characterization of supported chiral catalysts (Carmela Aprile, Hermenegildo Garcia and Paolo Pescarmona).4. Synthesis of chiral catalysts supported on organic polymers (Tor Erik Kristensen and Tore Hansen).5. Self-supported chiral catalysts (Hongchao Guo and Kuiling Ding).6. Catalysis with

chirally modified metal surfaces: scope and mechanisms (Angelo Vargas, Cecilia Mondelli and Alfons Baiker).7. Chiral ionic liquids for asymmetric reactions (Annie-Claude Gaumont, Yves Ge;nisson, Fre;de; ric Guillen and Jean-Christophe Plaquevent).8. Asymmetric reactions in flow reactors (Munawwer Racheed, Simon C. Elmore and Thomas Wirth). 9. Asymmetric catalytic synthesis in supercritical fluids (Tomoko Matsuda).10. Microwave-assisted transition metal-catalyzed asymmetric synthesis (Luke R. Odell and Mats Larhed).Part II. Recent advances in organocatalytic, enzymatic and metal-based mediated asymmetric synthesis.11. Recent advances on stereoselective organocatalytic reactions. Organocatalytic synthesis of natural products and drugs (Monika Ray and Vinod K. Singh). 12. Recent advances in biocatalysis applied to organic synthesis (Gonzalo de Gonzalo, Ivan Lavandera and Vicente Gotor).13. Peptides for asymmetric catalysis (Matthias Freund and Svetlana Tsogoeva).14. Siliciate-mediated steroselective reactions catalyzed by chiral Lewis bases (Maurizio Benaglia, Stefania Guizzetti and Sergio Rossi).15. Recent advances in the metal-ctalyzed steroselective synthesis of biologically active molecules (Catalina Ferrer, Xavier Verdaguer and Antoni Riera).16. Stereoselective nitrogen heterocycles synthesis mediated by chiral metal catalysts (Sherry R. Chemler).

Sommario/riassunto

"This book covers advances in the methods of catalytic asymmetric synthesis and their applications. Coverage moves from new materials such as chiral ionic liquids, supported catalysts and flow reactors; to homogeneous metal-free catalysts and homogeneous metal catalysts. The applications of several methodologies for the synthesis of biologically active molecules are discussed. Part I addresses recent advances in new technologies related to asymmetric catalysis. Part II covers advances and milestones with amino acids, both natural and unnatural, as powerful organocatalysts - including applications for the synthesis of biologically active molecules"--