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Descrizione fisica	1 online resource (VIII, 215 p. 205 illus., 16 illus. in color.)
Collana	Catalysis by Metal Complexes, , 0920-4652 ; ; 39
Disciplina	333.794
Soggetti	Catalysis Chemical engineering Sustainable development Environmental chemistry Industrial Chemistry/Chemical Engineering Sustainable Development Environmental Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	From the Contents: Introduction (Advantages of homogeneous catalysis in derivatisation of renewables) -- Oleochemicals -- Isoprenoids (Terpenes and steroids) -- Carbohydrates -- Lignin and lignin model compounds e.g. functionalisations and oxidations -- Proteins and amino acids -- Carbon dioxide, e.g. hydrogenations, telomerisations etc.
Sommario/riassunto	This volume gives a detailed account into how renewables can be transformed into value-added products via homogeneous catalysis, especially via transition metal homogeneous catalysis. The most important catalytic reactions of oleochemicals, isoprenoids, carbohydrates, lignin, proteins and carbon dioxide are described. Special emphasis is placed on carbon-carbon linkage reactions (hydroformylations, dimerisations, telomerisations, metathesis, polymerisations etc.), hydrogenations, oxidations and other important homogeneous reactions (such as isomerisations, hydrosilylations etc.).

Also, tandem reactions including isomerising hydroformylations are presented. Wherever possible, the authors have included mechanistic, kinetic, and technical aspects. The reader is therefore given a total overview of the status quo of homogeneous catalysis directed to the most important renewables.
