

1. Record Nr.	UNINA9910449983403321
Autore	Jones Craig W
Titolo	Applications of hydrogen peroxide and derivatives [[electronic resource] /] / Craig W. Jones
Pubbl/distr/stampa	Cambridge, : Royal Society of Chemistry, 1999
ISBN	1-84755-013-4 1-59124-918-X
Descrizione fisica	1 online resource (276 p.)
Collana	RSC clean technology monographs
Disciplina	546.2
Soggetti	Hydrogen peroxide Electronic books.
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	BK9780854045365-FX001; BK9780854045365-FP001; BK9780854045365-FP005; BK9780854045365-FP007; BK9780854045365-FP009; BK9780854045365-00001; BK9780854045365-00037; BK9780854045365-00079; BK9780854045365-00179; BK9780854045365-00207; BK9780854045365-00231; BK9780854045365-00257
Sommario/riassunto	Simple, but beautifully versatile. Perhaps not a description many would choose for hydrogen peroxide, but an accurate one none the less, and this unique book explains the reasons behind the description. Beginning with an historical overview, and guidelines for the safe handling of peroxygens, Applications of Hydrogen Peroxide and Derivatives goes on to cover key activation mechanisms, organic functional group oxidations and the use of hydrogen peroxide with heterogeneous catalysts. The clean-up of environmental pollutants; chemical purification; and extraction of metals from their ores are als

2. Record Nr.	UNINA9910820509303321
Autore	Calvo-Flores Francisco G.
Titolo	Lignin and lignans as renewable raw materials : chemistry, technology and applications // Francisco G. Calvo-Flores, Jose A. Dobado, Joaquin I. Garcia and Francisco J. Martin-Martinez
Pubbl/distr/stampa	Chichester, West Sussex : , : John Wiley and Sons, Incorporated, , 2015
ISBN	1-118-68351-X 1-118-68295-5
Descrizione fisica	1 online resource (521 p.)
Collana	Wiley series in renewable resources
Disciplina	572/.56682
Soggetti	Lignin Lignans Botanical chemistry Plant polymers
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	Cover; Title Page; Copyright; Dedication; Contents; Series Preface; Preface; List of Acronyms; List of Symbols; Part I Introduction; Chapter 1 Background and Overview; 1.1 Introduction; 1.2 Lignin: Economical Aspects and Sustainability; 1.3 Structure of the Book; References; Part II What is Lignin?; Chapter 2 Structure and Physicochemical Properties; 2.1 Introduction; 2.2 Monolignols, The Basis of a Complex Architecture; 2.3 Chemical Classification of Lignins; 2.4 Lignin Linkages; 2.5 Structural Models of Native Lignin; 2.5.1 Softwood Models; 2.5.2 Hardwood Models 2.5.3 Herbaceous Plant Models 2.6 Lignin-Carbohydrate Complex; 2.7 Physical and Chemical Properties of Lignins; 2.7.1 Molecular Weight; 2.7.2 Dispersity Index (); 2.7.3 Thermal Properties; 2.7.4 Solubility Properties; References; Chapter 3 Detection and Determination; 3.1 Introduction; 3.2 The Detection of Lignin (Color-Forming Reactions); 3.2.1 Reagents for Detecting Lignins; 3.3 Determination of Lignin; 3.4 Direct Methods for the Determination of Lignin; 3.4.1 Methods for Lignin as a Residue; 3.4.2 Lignin in Solution Methods; 3.5 Indirect Methods for the Determination of Lignin

3.5.1 Chemical Methods 3.5.2 Spectrophotometric Methods; 3.5.3 Methods Based on Oxidant Consumption; 3.6 Comparison of the Different Determination Methods; References; Chapter 4 Biosynthesis of Lignin; 4.1 Introduction; 4.2 The Biological Function of Lignins; 4.3 The Shikimic Acid Pathway; 4.4 The Common Phenylpropanoid Pathway; 4.5 The Biosynthesis of Lignin Precursors (the Monolignol-Specific Pathway); 4.5.1 The Biosynthesis of Other Monolignols; 4.5.2 The Transport of Monolignols; 4.6 The Dehydrogenation of the Precursors; 4.7 Peroxidases and Laccases; 4.8 The Radical Polymerization 4.8.1 Dimerization 4.8.2 Quinone Methides; 4.8.3 Lignification; 4.8.4 Interunit Linkage Types; 4.8.5 Dehydrogenation Polymer (DHP); 4.9 The Lignin-Carbohydrate Connectivity; 4.10 Location of Lignins (Cell Wall Lignification); 4.11 Differences Between Angiosperm and Gymnosperm Lignins; References; Part III Sources and Characterization of Lignin; Chapter 5 Isolation of Lignins; 5.1 Introduction; 5.2 Methods for Lignin Isolation from Wood and Grass for Laboratory Purposes; 5.2.1 Lignin as Residue; 5.2.2 Lignin by Dissolution; 5.3 Commercial Lignins; 5.3.1 Kraft Lignin 5.3.2 Sulfite Lignin (Lignosulfonate Process) 5.3.3 Soda Lignin (Alkali Lignin); 5.3.4 Organosolv Pulping; 5.3.5 Other Methods of Separation of Lignin from Biomass; References; Chapter 6 Functional and Spectroscopic Characterization of Lignins; 6.1 Introduction; 6.2 Elemental Analysis and Empirical Formula; 6.3 Determination of Molecular Weight; 6.3.1 Gel-Permeation Chromatography (GPC); 6.3.2 Light Scattering; 6.3.3 Vapor-Pressure Osmometry (VPO); 6.3.4 Ultrafiltration (UF); 6.4 Functional Group Analyses; 6.4.1 Methoxyl Group (MeO); 6.4.2 Phenolic Hydroxyl Group (OH ph) 6.4.3 Total and Aliphatic Hydroxyl Groups (R-OH)

Sommario/riassunto

As naturally occurring and abundant sources of non-fossil carbon, lignin and lignans offer exciting possibilities as a source of commercially valuable products, moving away from petrochemical-based feedstocks in favour of renewable raw materials. Lignin can be used directly in fields such as agriculture, livestock, soil rehabilitation, bioremediation and the polymer industry, or it can be chemically modified for the fabrication of specialty and high-value chemicals such as resins, adhesives, fuels and greases. Lignin and Lignans as Renewable Raw Materials presents a multidisciplinary overview