1. Record Nr. UNINA9911019604403321

Titolo	Stable radicals : fundamentals and applied aspects of odd-electron compounds / / editor, Robin Hicks
Pubbl/distr/stampa	Chichester, West Sussex, : Wiley, 2010
ISBN	9786612656637 9781119956969 111995696X 9781282656635 1282656635 9780470666975 0470666978 9780470666982 0470666986
Descrizione fisica	1 online resource (620 p.)
Altri autori (Persone)	HicksRobin
Disciplina	541/.224
Soggetti	Radicals (Chemistry) - Stability Electron mobility
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	Stable Radicals; Contents; Preface; List of Contributors; 1. Triarylmethyl and Related Radicals; 2. Polychlorotriphenylmethyl Radicals: Towards Multifunctional Molecular Materials; 3. Phenalenyls, Cyclopentadienyls, and Other Carbon-Centered Radicals; 4. The Nitrogen Oxides: Persistent Radicals and van der Waals Complex Dimers; 5. Nitroxide Radicals: Properties, Synthesis and Applications; 6. The Only Stable Organic Sigma Radicals: Di-tert-Alkyliminoxyls; 7. Verdazyls and Related Radicals Containing the Hydrazyl [R2N-NR] Group; 8. Metal Coordinated Phenoxyl Radicals 9. The Synthesis and Characterization of Stable Radicals Containing the Thiazyl (SN) Fragment and Their Use as Building Blocks for Advanced Functional Materials10. Stable Radicals of the Heavy p-Block Elements; 11. Application of Stable Radicals as Mediators in Living-Radical Polymerization; 12. Nitroxide-Catalyzed Alcohol Oxidations in Organic

Synthesis; 13. Metal-Nitroxide Complexes: Synthesis and Magnetostructural Correlations; 14. Rechargeable Batteries Using Robust but Redox Active Organic Radicals; 15. Spin Labeling: A Modern Perspective
16. Functional in vivo EPR Spectroscopy and Imaging Using Nitroxide and Trityl Radicals17. Biologically Relevant Chemistry of Nitroxides; Index

Sommario/riassunto

Stable radicals - molecules with odd electrons which are sufficiently long lived to be studied or isolated using conventional techniques - have enjoyed a long history and are of current interest for a broad array of fundamental and applied reasons, for example to study and drive novel chemical reactions, in the development of rechargeable batteries or the study of free radical reactions in the body. In Stable Radicals: Fundamentals and Applied Aspects of Odd-Electron Compounds a team of international experts provide a broad-based overview of stable radicals, from the fundamental aspec