Record Nr. UNINA9910140735203321 Stable radicals: fundamentals and applied aspects of odd-electron **Titolo** compounds / / editor, Robin G. Hicks Pubbl/distr/stampa Chichester, England:,: Wiley,, 2010 ©2010 **ISBN** 1-119-95696-X 1-282-65663-5 9786612656637 0-470-66697-8 0-470-66698-6 Descrizione fisica 1 online resource (620 p.) Disciplina 541.224 541/.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 at the end of each chapters 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 Materials 10. 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