Record Nr. UNINA9910254026303321 Cycloadditions in Bioorthogonal Chemistry / / edited by Milan Vrabel, **Titolo** Thomas Carell Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2016 **ISBN** 3-319-29686-8 Edizione [1st ed. 2016.] 1 online resource (V, 157 p. 88 illus., 42 illus. in color.) Descrizione fisica Collana Topics in Current Chemistry Collections, , 2367-4067 Disciplina 547 Soggetti Bioorganic chemistry Medicinal chemistry Genetic engineering Bioorganic Chemistry Medicinal Chemistry Genetic Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references at the end of each chapters. Nota di contenuto Bioorthogonal Chemistry: Introduction and Overview -- Transition Metal Catalyzed Bioorthogonal Cycloaddition Reactions -- Strain-Promoted 1,3-Dipolar Cycloaddition of Cycloalkynes and Organic Azides -- Photo-triggered Click Chemistry for Biological Applications -- Inverse Electron-Demand Diels-Alder Bioorthogonal Reactions --Cycloadditions for Studying Nucleic Acids. Sommario/riassunto The series Topics in Current Chemistry Collections presents critical reviews from the journal Topics in Current Chemistry organized in topical volumes. The scope of coverage is all areas of chemical science including the interfaces with related disciplines such as biology. medicine and materials science. The goal of each thematic volume is to give the non-specialist reader, whether in academia or industry, a comprehensive insight into an area where new research is emerging which is of interest to a larger scientific audience. Each review within the volume critically surveys one aspect of that topic and places it within the context of the volume as a whole. The most significant

developments of the last 5 to 10 years are presented using selected

examples to illustrate the principles discussed. The coverage is not intended to be an exhaustive summary of the field or include large quantities of data, but should rather be conceptual, concentrating on the methodological thinking that will allow the non-specialist reader to understand the information presented. Contributions also offer an outlook on potential future developments in the field.