1. Record Nr. UNINA9910426043903321 Autore Rios Jesus Perez Titolo An introduction to cold and ultracold chemistry: atoms, molecules, ions and Rydbergs / / Jesus Perez Rios Pubbl/distr/stampa Cham, Switzerland: ,: Springer, , [2020] ©2020 **ISBN** 3-030-55936-X Edizione [1st ed. 2020.] 1 online resource (XIX, 267 p. 114 illus., 92 illus. in color.) Descrizione fisica Disciplina 541.3686 Cryochemistry Soggetti Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Sommario/riassunto This book provides advanced undergraduate and graduate students with an overview of the fundamentals of cold and ultracold chemistry. Beginning with definitions of what cold and ultracold temperatures mean in chemistry, the book then takes the student through the essentials of scattering theory (classical and quantum mechanical), light-matter interaction, reaction dynamics and Rydberg physics. The author aims to show the reader the richness of the topic while motivating students to understand the fundamentals of these intriguing reactions and underlying connecting relationships. Including material which was previously only found in specialized review articles, this book provides students working in the fields of ultracold gases. chemical physics and physical chemistry with the tools they need to immerse themselves in the realm of cold and ultracold chemistry. This

book opens up the exciting chemical laws which govern chemistry at

low temperatures to the next generation of researchers.