1. Record Nr. UNINA9910822158803321 Autore Marcus Y Titolo Supercritical water: a green solvent: properties and uses // Yizhak Marcus Pubbl/distr/stampa Hoboken, N.J., : Wiley, c2012 **ISBN** 1-280-67881-X 9786613655745 1-118-31027-6 1-118-31025-X 1-118-31022-5 Edizione [2nd ed.] Descrizione fisica 1 online resource (220 p.) Classificazione SCI013050 Disciplina 541/.3482 Soggetti Solvents Green technology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes indexes. Nota di bibliografia Includes bibliographical references and indexes. Nota di contenuto Machine generated contents note: PrefaceList of symbols1. Introduction 1.1 Phase diagrams of single fluids 1.2 The critical point 1.3 Supercritical fluids as solvents1.4 Gaseous and liquid water1.5 Nearcritical water 1.6 Summary 2. Bulk properties of SCW 2.1 Equations of state2.2 Thermophysical properties2.3 Electrical and Optical Properties 2.4 Transport Properties 2.5 Ionic Dissociation of SCW 2.6 Properties related to the solvent power of SCW2.7 Summary3. Molecular properties 3.1 Structure of SCW obtained by diffraction 3.2 Computer simulations of SCW3.3 Spectroscopic studies of SCW3.4 Extent of hydrogen bonding 3.5 The dynamics of water molecules in SCW 3.5 Summary4. SCW as a 'green' solvent4.1 Solutions of gases in SCW4.2

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Sommario/riassunto

"This is the only book on the market that covers the issue of supercritical water in such a comprehensive way. The book begins with an introduction that defines supercritical fluids in general and supercritical water in particular and relates it to water along the saturation curve"--