1. Record Nr. UNINA9910143588803321 Autore Freund Michael S Titolo Self-doped conductiong polymers [[electronic resource] /] / Michael S. Freund and Bhavana A. Deore Chichester, England; ; Hoboken, NJ, : Wiley, c2007 Pubbl/distr/stampa **ISBN** 1-282-34575-3 9786612345753 0-470-06172-3 0-470-06173-1 Descrizione fisica 1 online resource (340 p.) Altri autori (Persone) DeoreBhavana 547.7 Disciplina 547.70457 547/.70457 Soggetti Conducting polymers Doped semiconductors Polymerization Electric apparatus and appliances - Materials Electronic books. 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 Self-Doped Conducting Polymers; Contents; About the Authors; Preface: 1 Introduction: 1.1 Conducting Polymers: 1.1.1 History of Conjugated Conducting Polymers; 1.1.2 Concept of Doping in Intrinsically Conducting Polymers; 1.1.3 Conduction Mechanism; 1.1.4 Synthesis; 1.1.5 Processability; 1.2 Self-Doped Conducting Polymers; 1.3 Types of Self-Doped Polymers; 1.4 Doping Mechanism in Self-Doped Polymers; 1.4.1 p-Type Doping; 1.4.2 n-Type Doping; 1.4.3 Auto Doping: 1.5 Effect of Substituents on Properties of Polymers: 1.5.1 Solubility; 1.5.2 DC Conductivity; 1.5.3 Molecular Weight 1.5.4 Redox Properties1.5.5 Electronic and Spectroscopic Properties; 1.5.6 Mechanical and Thermal Properties; 1.6 Applications of Self-Doped Polymers; 1.6.1 Molecular Level Processing; 1.6.2 Transistors; 1.6.3 Biosensors; 1.6.4 e-Beam Lithography; 1.6.5 Electrochromic

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Sommario/riassunto

Self-Doped Conducting Polymers provides an introduction to conducting polymers in general and self-doped conducting polymers in particular. This is followed by an in depth exploration of the synthesis, properties and utilization of several types of self-doped polymers. Optimization of self-doped polymers is also discussed.