

1. Record Nr.	UNINA9910254140903321
Autore	Mukherjee Sanjoy
Titolo	Organic Radical Polymers : New Avenues in Organic Electronics / / by Sanjoy Mukherjee, Bryan W. Boudouris
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-58574-6
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (IX, 80 p. 42 illus. in color.)
Collana	SpringerBriefs in Materials, , 2192-1091
Disciplina	547.139
Soggetti	Optical materials Electronics - Materials Polymers Electronic circuits Energy storage Electronics Microelectronics Chemistry, Organic Optical and Electronic Materials Polymer Sciences Electronic Circuits and Devices Energy Storage Electronics and Microelectronics, Instrumentation Organic Chemistry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Chapter 1. An Introduction to Radical Polymers -- Chapter 2. Syntheses of Radical Polymers -- Chapter 3. Applications of Radical Polymers in Electrolyte-supported Devices -- Chapter 4. Applications of Radical Polymers in Solid-state Devices -- Chapter 5. Conclusions and Future Outlook.
Sommario/riassunto	This book provides a detailed introduction to organic radical polymers and open-shell macromolecules. Functional macromolecules have led

to marked increases in a wide range of technologies, and one of the fastest growing of these fields is that of organic electronic materials and devices. To date, synthetic and organic electronic device efforts have focused almost exclusively on closed-shell polymers despite the promise of open-shell macromolecules in myriad applications. This text represents the first comprehensive review of the design, synthesis, characterization, and device applications of open-shell polymers. In particular, it will summarize the impressive synthetic and device performance efforts that have been achieved with respect to energy storage, energy conversion, magnetic, and spintronic applications. By combining comprehensive reviews with a wealth of informative figures, the text provides the reader with a complete “molecules-to-modules” understanding of the state of the art in open-shell macromolecules. Moreover, the monograph highlights future directions for open-shell polymers in order to allow the reader to be part of the community that continues to build the field. In this way, the reader will gain a rapid understanding of the field and will have a clear pathway to utilize these materials in next-generation applications.

---