Record Nr.	UNINA9910734880603321
Titolo	Bio-based Superabsorbents : Recent Trends, Types, Applications and Recycling / / edited by Sukanya Pradhan, Smita Mohanty
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-9930-94-4
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (200 pages)
Collana	Engineering Materials, , 1868-1212
Disciplina	660.284235
Soggetti	Biopolymers
	Biomaterials
	Green chemistry
	Sustainability
	Green Chemistry
	Soft Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Biobased Superabsorbent Polymers: An Overview 2. Synthesis of biopolymer based superabsorbent: An eco-friendly approach towards future sustainability 3. Bio-based versus Petro based Superabsorbent polymer 4. Theory of Superabsorbent Polymers 5. Chitin/Chitosan Based Superabsorbent Polymers 6. Alginate based Superabsorbents 7. Starch-Based Superabsorbent Polymer 8. Protein-Based Superabsorbent Polymers 9. Recycling and Reuse of superabsorbent polymers 10. Bio-Based Superabsorbent Polymer: Current trends, Applications & Future Scope.
Sommario/riassunto	This book examines the synthetic approaches, properties, applications, and recyclability of bio-based superabsorbent polymers (SAP) in depth. It describes and compares bio-based SAPs with petro-based SAPs. Additionally, it explores the structure–property relationships of bio- based SAPs derived from various natural sources. The book covers current and emerging applications in health and hygiene products, agriculture, construction, and other areas. It also explores the recycling and reusing methods available for water recovery, pressure sensitive

1.

adhesives, etc. It discusses the issues behind the sharp increase in research attention, namely the prevailing research hotspots/clusters and suggestions with regard to present studies, works that have been significant and pivotal in the development of SAP research, and the current advances and future directions of research. It also presents the emerging applications of superabsorbent polymers.