1. Record Nr. UNINA9911018763703321

Titolo	Cyclodextrins for Chemosensing / / edited by Sivakumar Krishnamoorthy
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2025
ISBN	9783031892998
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (XI, 374 p. 199 illus., 184 illus. in color.)
Disciplina	543
Soggetti	Chemical detectors Supramolecular chemistry Environmental monitoring Sensors Supramolecular Chemistry Environmental Monitoring
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1 Introduction and fundamentals of Chemosensing using Cyclodextrins -- 2 Mechanism of Chemosensing using Cyclodextrins -- 3 Impact of weak interactions in Chemosensing using Cyclodextrins -- 4 Role of steric effect Chemosensing using Cyclodextrins -- 5 Colorimetric sensing of metals using Cyclodextrins -- 6 Fluorescence sensing of metals using Cyclodextrins -- 7 Electrochemical detection of metals using cyclodextrins -- 8 Chemosensing of small molecules using cyclodextrins -- 9 Application of cyclodextrins in environmental pollutants detection -- 10 Sensory applications of cyclodextrins in forensic science.
Sommario/riassunto	This book covers the fundamental as well as the advanced aspects of using cyclodextrins effectively for the selective sensing of analytes, designing sensory systems using cyclodextrins, and the mechanisms of cyclodextrins-based sensors. It ultimately provides a holistic and collective understanding on the various chemosensory systems based on cyclodextrins, which will help readers in designing and developing new sensors. This book serves as an invaluable single-point reference material for researchers working in both academia and industry, as well

as to students and librarians. Readers will gain valuable insights into selecting suitable cyclodextrins based on the size of the analyte, optimizing sensitivity and selectivity, comparing LOD/LOQ, and more.