

1. Record Nr.	UNINA9910780046303321
Titolo	Calixarenes 2001 [[electronic resource] /] / edited by Zouhair Asfari ... [et al.]
Pubbl/distr/stampa	New York, : Kluwer Academic, c2001
ISBN	1-280-20009-X 9786610200092 0-306-47522-7
Edizione	[1st ed. 2001.]
Descrizione fisica	1 online resource (694 p.)
Altri autori (Persone)	AsfariZ (Zouhair)
Disciplina	547.632
Soggetti	Calixarenes Supramolecular chemistry
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	Synthesis of Calixarenes and Thiacalixarenes -- Chemical Modification of Calix[4]arenes and Resorcurenes -- Selectively Modified Calix[5]arenes -- Selective Modifications of Calix[6]arenes -- Chemistry of Larger Calix[n]arenes (n=7, 8, 9) -- Thia-, Mercapto-, and Thiamercapto-Calix[4]arenes -- Double- and Multi-Calixarenes -- Self-Assembly in Solution -- Cavitands -- Carcerands -- Homocalixarenes -- Homooxa- and Homoaza-Calixarenes -- Heterocalixarenes -- Oxidation and Reduction of Aromatic Rings -- Conformations and Stereodynamics -- Dynamic Structures of Host-Guest Systems -- Molecular Dynamics of Cation Complexation and Extraction -- Quantum Chemical Calculations on Alkali Metal Complexes -- Thermodynamics of Calixarene-Ion Interactions -- Crown Ethers Derived from Calix[4]arenes -- Metal-Ion Complexation by Narrow Rim Carbonyl Derivatives -- Phase Transfer Extraction of Heavy Metals -- Calixarene-Based Anion Receptors -- Water-Soluble Calixarenes -- Recognition of Neutral Molecules -- Complexation of Fullerenes -- Calixarenes in Bioorganic and Biomimetic Chemistry -- Coordination Chemistry and Catalysis -- Metal Reactivity on Oxo Surfaces Modeled by Calix[4]arenes -- Phenoxide Complexes of f-Elements -- Luminescent Probes -- Turning Ionophores into Chromo- and Fluoro-Ionophores -- Mono- and Multi-Layers -- Sensor

Calixarene chemistry, at the turn of the millennium, is a field approaching true maturity. In many areas, applications are real and important, and the arsenal of structures based on calixarenes provides tools effective in numerous areas of supramolecular chemistry. In this book, chapters contributed by a broad spectrum of international authors provide a variety of perspectives upon the progress and future of calixarene chemistry. Issues covered in depth include: Calixarene synthesis, with all its subtleties and sophistication. Forces at play in the inclusion of neutral and charged molecules by calixarenes. Theoretical analyses of calixarene properties. Dynamics and thermodynamics of calixarenes and their complexes. Nanocomposite construction based on calixarene aggregates. Calixarenes on surfaces. Analytical applications of calixarenes. Catalysis by calixarenes and their complexes. Resource recovery and waste treatment with calixarenes. New directions in calixarene chemistry. Hetero- and homo-calixarenes. Bioactive calixarenes. Coordination chemistry of calixarenes. Calixarenes in the solid state.
