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Nota di contenuto	HOST-GUEST MOLECULAR INTERACTIONS: FROM CHEMISTRY TO BIOLOGY; Contents; Introduction; Molecular self-assembly processes; Self-assembly in supramolecular systems; General discussion I : Flexibility or rigidity?; Host-guest interactions in thin membranes: selective ion transport and transduction into electronic signals; Molecular recognition and molecular sensors; The natural design of vancomycin family antibiotics to bind to their target peptides; General discussion II : Crystals as supramolecules; Molecular devices and sensors; Clefs as receptor and enzyme analogues; Enzyme mimics Binding of antibiotics to DNA Design of sequence-specific bifunctional nucleic acid ligands; Synthesis and biochemical studies of dithioate DNA; Conformational flexibility and protein specificity; Protein design: template-assembled synthetic proteins; General discussion III Transition state theory and energy requirements for reaction; Binding of peptides to proteins: an exercise in molecular design; Involvement of water in host-guest interactions; Molecular modelling approaches to

host-guest complexes; Summing-up; Index of contributors; Subject index

Sommario/riassunto

Composed of contributions from experts in the chemical and biological sciences, it explores host-guest molecular interactions leading to the formation of molecular assemblies containing two or more species. Exciting applications are emerging in this field and it is expected that improved understanding of the interactions in synthetic host molecule complexes will lead to a better understanding of the more complex biological systems. Topics include biomimetic chemistry, preorganization, self-assembly, template-directed synthesis, antibiotic binding to peptides and DNA, interactions between prote
