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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Molecular Assembly of Biomimetic Systems; Contents; Preface; Introduction; Biomimetic Membranes; Layer-by-Layer Assembly of Biomimetic Microcapsules; FoF1-ATP Synthase-Based Active Biomimetic Systems; Kinesin-Microtubule-Driven Active Biomimetic Systems; Biomimetic Interface; Peptide-Based Biomimetic Materials; 1: Biomimetic Membranes; 1.1 Introduction; 1.2 Lipid Monolayers; 1.2.1 Phospholipid Monolayers at the Air/Water Interface; 1.2.2 Phospholipid Monolayers at the Oil/Water Interface; 1.2.3 Interfacial Behavior of Phospholipid Monolayers; 1.2.4 Protein Layers at the Oil/Water Interface 1.2.4.1 Kinetics of Protein Adsorption1.2.4.2 Formation of "Skin-Like" Protein Films on a Curved Interface; 1.2.5 Interfacial Behavior of

Phospholipid/Protein Composite Layers; 1.2.5.1 Dynamic Adsorption and Mechanism; 1.2.5.2 Assembly of "Skin-Like" Complex Films on a Curved Interface; 1.3 Modeling Membrane Hydrolysis In Vitro; 1.3.1 PLA2; 1.3.2 PLC; 1.3.3 PLD; 1.4 Polyelectrolyte-Supported Lipid Bilayers; 1.4.1 Polyelectrolyte Multilayers on Planar Surfaces; 1.4.2 Polyelectrolyte Multilayers on Curved Surfaces; 1.5 Conclusions and Perspectives; References
2: Layer-by-Layer Assembly of Biomimetic Microcapsules2.1 Introduction; 2.2 Layer-by-layer Assembly of Polyelectrolyte Multilayer Microcapsules; 2.2.1 General Aspects; 2.2.2 Permeation and Mechanical Properties of LbL Microcapsules; 2.3 Biointerfacing Polyelectrolyte Microcapsules-A Multifunctional Cargo System; 2.3.1 Lipid Bilayer-Modified Polyelectrolyte Microcapsules; 2.3.2 Formation of Asymmetric Lipid Bilayers on the Surface of LbL-Assembled Capsules; 2.3.3 Assembly of Lipid Bilayers on Covalently LbL-Assembled Protein Capsules; 2.4 Application of Biomimetic Microcapsules
2.4.1 Integrating Specific Biofunctionality for Targeting2.4.2 Adsorption of Antibodies on the Surface of Biomimetic Microcapsules; 2.5 Conclusions and Perspectives; References; 3: FoF1-ATP Synthase-Based Active Biomimetic Systems; 3.1 Introduction; 3.2 FoF1-ATPase-A Rotary Molecular Motor; 3.2.1 Structure of H+FoF1-ATPase; 3.2.2 Direct Observation of the Rotation of Single ATPase Molecules; 3.3 Reconstitution of FoF1-ATPase in Cellular Mimic Structures; 3.3.1 FoF1-ATPase-incorporated Liposome-A Classical Biomembrane Mimic; 3.3.1.1 Bacteriorhodopsin uses Light to Pump Protons
3.3.1.2 Proton Gradients Produced by Artificial Photosynthetic Reactions3.3.2 ATP Biosynthesis from Biomimetic Microcapsules; 3.3.2.1 Generation of Proton Gradients in Polymer Capsules by the Change of pH Values; 3.3.2.2 Proton Gradients in Protein Capsules Supplied by the Oxidative Hydrolysis of Glucoses; 3.3.2.3 Proton Gradients Generated by GOD Capsules; 3.3.3 Reassembly of FoF1-ATPase in Polymersomes; 3.4 Conclusions and Perspectives; References; 4: Kinesin-Microtubule-Driven Active Biomimetic Systems; 4.1 Introduction; 4.2 Kinesin-Microtubule Active Transport Systems
4.3 Active Biomimetic Systems Based on the Kinesin-Microtubule Complex

Sommario/riassunto

This handy reference details state-of-the-art preparation of molecular assemblies of biotechnologically relevant biomimetic systems (artificial proteins, peptides, molecular motors, photosensitive systems) with an emphasis on biomimetic membranes, capsules, and interfaces. Medical applications such as drug release, gene therapy, and tissue engineering as well as biosensing, biocatalysis, and energy storage are highlighted.

2. Record Nr. UNINA9910962544703321

Autore	Pankenier David W (David William)
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Nota di contenuto	Part One. Astronomy and cosmology in the time of dragons -- Part Two. Aligning with heaven -- Part Three. Planetary omens and cosmic ideology -- Part Four. Warring states and Han astral portentology -- Part Five. One with the sky.
Sommario/riassunto	The ancient Chinese were profoundly influenced by the Sun, Moon and stars, making persistent efforts to mirror astral phenomena in shaping their civilization. In this pioneering text, David W. Pankenier introduces readers to a seriously understudied field, illustrating how astronomy shaped the culture of China from the very beginning and how it influenced areas as disparate as art, architecture, calendrical science, myth, technology, and political and military decision-making. As elsewhere in the ancient world, there was no positive distinction between astronomy and astrology in ancient China, and so astrology, or more precisely, astral omenology, is a principal focus of the book. Drawing on a broad range of sources, including archaeological discoveries, classical texts, inscriptions and paleography, this thought-provoking book documents the role of astronomical phenomena in the

development of the 'Celestial Empire' from the late Neolithic through the late imperial period.