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| Nota di contenuto | MASS SPECTROMETRY IN STRUCTURAL BIOLOGY AND BIOPHYSICS: Architecture, Dynamics, and Interaction of Biomolecules; CONTENTS; Preface to the Second Edition; Preface to the First Edition; 1 General Overview of Basic Concepts in Molecular Biophysics; 1.1 Covalent Structure of Biopolymers; 1.2 Noncovalent Interactions and Higher Order Structure; 1.2.1 Electrostatic Interaction; 1.2.2 Hydrogen Bonding; 1.2.3 Steric Clashes and Allowed Conformations of the Peptide Backbone: Secondary Structure; 1.2.4 Solvent--Solute Interactions, Hydrophobic Effect, Side-Chain Packing, and Tertiary Structure 1.2.5 Intermolecular Interactions and Association: Quaternary Structure1.3 The Protein Folding Problem; 1.3.1 What Is Protein Folding?; 1.3.2 Why Is Protein Folding So Important?; 1.3.3 What Is the Natively Folded Protein and How Do We Define a Protein Conformation?; |

1.3.4 What Are Non-Native Protein Conformations?: Random Coils, Molten Globules, and Folding Intermediates; 1.3.5 Protein Folding Pathways; 1.4 Protein Energy Landscapes and the Folding Problem; 1.4.1 Protein Conformational Ensembles and Energy Landscapes: Enthalpic and Entropic Considerations; 1.4.2 Equilibrium and Kinetic Intermediates on the Energy Landscape; 1.5 Protein Dynamics and Function; 1.5.1 Limitations of the Structure--Function Paradigm; 1.5.2 Protein Dynamics under Native Conditions; 1.5.3 Is Well-Defined Structure Required for Functional Competence?; 1.5.4 Biomolecular Dynamics and Binding from The Energy Landscape Perspective; 1.5.5 Energy Landscapes Within a Broader Context of Nonlinear Dynamics: Information Flow and Fitness Landscapes; 1.6 Protein Higher Order Structure and Dynamics from A Biotechnology Perspective; References

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Sommario/riassunto

The definitive guide to mass spectrometry techniques in biology and biophysics The use of mass spectrometry (MS) to study the architecture and dynamics of proteins is increasingly common within the biophysical community, and Mass Spectrometry in Structural Biology and Biophysics: Architecture, Dynamics, and Interaction of Biomolecules, Second Edition provides readers with detailed, systematic coverage of the current state of the art. Offering an unrivalled overview of modern MS-based armamentarium that can be used to solve the most challenging problems in biophysics, structural biol