Nanoparticles And Nanodevices In Biological Applications

Supramolecular Photochemistry;144 7.4.3;4.3 [Ru(bpy)3]2+: A Multi-Use Component of Light-Powered Molecular Devices and Machines;145 7.5;5 Wires;146 7.6;6 Switches;149 7.7;7 Plug-Socket and Extension Cable Systems;151 7.8;8 Antennas for Light Harvesting;154 7.9;9 Fluorescent Sensors with Signal Amplification;155 7.10;10 Logic Gates;157 7.10.1;10.1 AND Logic Gate;158 7.10.2;10.2 XOR and XNOR Logic Gates;159 7.11;11 Light Driven Molecular Machines;160 7.11.1;11.1 Dethreading/Rethreading of Pseudorotaxanes;161 7.11.2;11.2 A Sunlight Powered Nanomotor;162 7.12;12 Conclusions;164 7.13;References;165 8;Hofmeister Effects in Enzymatic Activity, Colloid Stability and pH Measurements: Ion- Dependent Specificity of Intermolecular Forces;168 8.1;1 Introduction;168 8.2;2 Enzymatic Activity: Role of Buffers, Salts, pH and Ionic Strength ;171 8.2.1;2.1 The Case of the Lipase from Aspergillus niger;171 8.2.2;2.2 The Case of the Lipase from Candida rugosa;174 8.2.3;2.3 Inferences from Hofmeister Effects Observed in Enzyme Activity;183 8.3;3 Colloid Stability: Limits of the DLVO Theory;184 8.4;4 Salt Effects on pH of Buffered Solutions;186 8.4.1;4.1 Phosphate and Cacodylate Buffers (Sodium Salts);188 8.4.2;4.2 Reversal of Effects with Potassium Salts;189 8.4.3;4.3 Role of Buffer Concentration;190 8.4.4;4.4 pH Values and Intermolecular Forces;191 8.4.5;4.5 Correlation Between pH and Other Physico-chemical Properties: Hofmeister Fingerprints;192 8.4.6;4.6 Bulk Interactions;194 8.4.7;4.7 Surface Interactions EAN/ISBN : 9783540709466 Publisher(s): Springer, Berlin Format: ePub/PDF Author(s): Bellucci, Stefano - Wang, Zhiming M. - Waag, Andreas - Salamo, Gregory