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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Navigation on a Micron Scale -- Myosin Motors: The Chemical Restraints Imposed by ATP -- How Linear Motor Proteins Work -- Axonal Transport: Imaging and Modeling of a Neuronal Process -- Intracellular Transport and Kinesin Superfamily Proteins: Structure, Function and Dynamics -- Studies of DNA-Protein Interactions at the Single Molecule Level with Magnetic Tweezers -- Membrane Nanotubes -- Macromolecular Motion at the Nanoscale of Enzymes Working on Polysaccharides -- Brownian Motion after Einstein: Some New Applications and New Experiments -- Nonequilibrium Fluctuations of a Single Biomolecule -- When is a Distribution Not a Distribution, and Why Would You Care: Single-Molecule Measurements of Repressor Protein 1-D Diffusion on DNA -- BioNEMS: Nanomechanical Systems for Single-Molecule Biophysics -- Nanodevices for Single Molecule Studies -- Artificial Dipolar Molecular Rotors -- Using DNA to Power the Nanoworld -- Tuning Ion Current Rectification in Synthetic Nanotubes -- NanoShuttles: Harnessing Motor Proteins to Transport Cargo in Synthetic Environments -- Nanotechnology Enhanced Functional Assays

	of Actomyosin Motility – Potentials and Challenges.
Sommario/riassunto	When the size of a machine approaches the nanometer scale, thermal fluctuations become large compared to the energies that drive the motor. The control of motion at the nanoscale therefore requires physical understanding and technical approaches that are fundamentally different from those that are successful at the macroscale. This volume provides an introduction to the state-of-the-art of controlled nanoscale motion in biological and artificial systems. Topics include the control and function of protein motors, the physics of non-equilibrium Brownian motion, and the physics and fabrication of synthetic molecular motors. The chapters in this book are based on selected contributions on the 2005 Nobel Symposium to Controlled Nanoscale Motion and are written by leading experts in their fields.