

Molecular Biophysics Internship Topics

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50
Active Categories

15
Focused Areas

Internships
Internships

Molecular Biophysics Internship Categories

AI Single-Molecule Force Spectroscopy Research https://internships.nthrys.com/molecular-biophysics/ai-single-molecule-force-spectroscopy	Machine Learning Protein Folding Biophysics https://internships.nthrys.com/molecular-biophysics/machine-learning-protein-folding-biophysics
AI Molecular Motor Biophysics Research https://internships.nthrys.com/molecular-biophysics/ai-molecular-motor-biophysics-research	AI Membrane Biophysics Research https://internships.nthrys.com/molecular-biophysics/ai-membrane-biophysics-research
AI DNA Mechanics Research https://internships.nthrys.com/molecular-biophysics/ai-dna-mechanics-research	AI FRET Biophysics Research https://internships.nthrys.com/molecular-biophysics/ai-fret-biophysics-research
AI Cryo-EM Molecular Biophysics Research https://internships.nthrys.com/molecular-biophysics/ai-cryo-em-molecular-biophysics-research	AI Phase Separation Biophysics Research https://internships.nthrys.com/molecular-biophysics/ai-phase-separation-biophysics-research
AI Ion Channel Molecular Research https://internships.nthrys.com/molecular-biophysics/ai-ion-channel-molecular-research	AI MD Simulation Biophysics Research https://internships.nthrys.com/molecular-biophysics/ai-md-simulation-biophysics-research
Protein-Ligand Binding Kinetics Research https://internships.nthrys.com/molecular-biophysics/protein-ligand-binding-kinetics-research	Structural Biology X-ray Crystallography https://internships.nthrys.com/molecular-biophysics/structural-biology-x-ray-crystallography
Biomolecular NMR Spectroscopy Studies https://internships.nthrys.com/molecular-biophysics/biomolecular-nmr-spectroscopy-studies	Single-Molecule Optical Trapping Research https://internships.nthrys.com/molecular-biophysics/single-molecule-optical-trapping-research
Protein Aggregation and Amyloid Studies https://internships.nthrys.com/molecular-biophysics/protein-aggregation-and-amyloid-studies	Enzyme Kinetics and Catalysis Research https://internships.nthrys.com/molecular-biophysics/enzyme-kinetics-and-catalysis-research
Fluorescence Anisotropy Binding Studies https://internships.nthrys.com/molecular-biophysics/fluorescence-anisotropy-binding-studies	Circular Dichroism Protein Characterization https://internships.nthrys.com/molecular-biophysics/circular-dichroism-protein-characterization
Atomic Force Microscopy Biomolecules https://internships.nthrys.com/molecular-biophysics/atomic-force-microscopy-biomolecules	Molecular Docking and Virtual Screening https://internships.nthrys.com/molecular-biophysics/molecular-docking-and-virtual-screening
Hydrogen-Deuterium Exchange Mass Spectrometry https://internships.nthrys.com/molecular-biophysics/hydrogen-deuterium-exchange-mass-spectrometry	Biolayer Interferometry Kinetics Research https://internships.nthrys.com/molecular-biophysics/biolayer-interferometry-kinetics-research
Lipid Bilayer Membrane Biophysics https://internships.nthrys.com/molecular-biophysics/lipid-bilayer-membrane-biophysics	Electron Paramagnetic Resonance Spectroscopy https://internships.nthrys.com/molecular-biophysics/electron-paramagnetic-resonance-spectroscopy
Thermal Shift Assay Drug Screening https://internships.nthrys.com/molecular-biophysics/thermal-shift-assay-drug-screening	Protein-Protein Interaction Network Mapping https://internships.nthrys.com/molecular-biophysics/protein-protein-interaction-network-mapping
Ultracentrifugation Molecular Weight Analysis https://internships.nthrys.com/molecular-biophysics/ultracentrifugation-molecular-weight-analysis	Quantum Mechanical Molecular Modeling https://internships.nthrys.com/molecular-biophysics/quantum-mechanical-molecular-modeling
RNA Structure and Folding Research https://internships.nthrys.com/molecular-biophysics/rna-structure-and-folding-research	Differential Scanning Calorimetry Studies https://internships.nthrys.com/molecular-biophysics/differential-scanning-calorimetry-studies
Microfluidic Single-Cell Biophysics https://internships.nthrys.com/molecular-biophysics/microfluidic-single-cell-biophysics	Small-Angle X-ray Scattering Analysis https://internships.nthrys.com/molecular-biophysics/small-angle-x-ray-scattering-analysis

Isothermal Titration Calorimetry Thermodynamics https://internships.nthrys.com/molecular-biophysics/isothermal-titration-calorimetry-thermodynamics	Electrophoretic Mobility Shift Assays https://internships.nthrys.com/molecular-biophysics/electrophoretic-mobility-shift-assays
Surface Plasmon Resonance Biosensing https://internships.nthrys.com/molecular-biophysics/surface-plasmon-resonance-biosensing	Protein-Chromophore Spectroscopy Analysis https://internships.nthrys.com/molecular-biophysics/protein-chromophore-spectroscopy-analysis
Cross-linking Mass Spectrometry Proteomics https://internships.nthrys.com/molecular-biophysics/cross-linking-mass-spectrometry-proteomics	Membrane Protein Reconstitution Experiments https://internships.nthrys.com/molecular-biophysics/membrane-protein-reconstitution-experiments
Spectral Analysis Protein Interactions https://internships.nthrys.com/molecular-biophysics/spectral-analysis-protein-interactions	Coarse-Grained Molecular Dynamics Modeling https://internships.nthrys.com/molecular-biophysics/coarse-grained-molecular-dynamics-modeling
DNA Helix Stability and Melting Studies https://internships.nthrys.com/molecular-biophysics/dna-helix-stability-and-melting-studies	Neutron Scattering Structural Biology https://internships.nthrys.com/molecular-biophysics/neutron-scattering-structural-biology
Protein Stability Mutation Engineering https://internships.nthrys.com/molecular-biophysics/protein-stability-mutation-engineering	Electrostatic Surface Potential Calculations https://internships.nthrys.com/molecular-biophysics/electrostatic-surface-potential-calculations
Protein Purification and Characterization https://internships.nthrys.com/molecular-biophysics/protein-purification-and-characterization	Biomolecular Vibrational Spectroscopy https://internships.nthrys.com/molecular-biophysics/biomolecular-vibrational-spectroscopy
Molecular Docking Validation Experiments https://internships.nthrys.com/molecular-biophysics/molecular-docking-validation-experiments	Protein Electrophoresis Gel Analysis https://internships.nthrys.com/molecular-biophysics/protein-electrophoresis-gel-analysis
Macromolecular Crowding Effect Studies https://internships.nthrys.com/molecular-biophysics/macromolecular-crowding-effect-studies	Biomimetic Membrane System Engineering https://internships.nthrys.com/molecular-biophysics/biomimetic-membrane-system-engineering

Molecular Biophysics Internship Topics and Focused Areas

AI Phase Separation Biophysics Research

- Machine Learning Models for Phase Separation Prediction
- Molecular Dynamics Simulations of Biomolecular Condensates
- AI-Driven Design of Synthetic Phase-Separating Systems
- Image Analysis and Computer Vision for Condensate Quantification
- Coarse-Grained Modeling and Multi-Scale Simulation Integration

Molecular Docking and Virtual Screening

- Structure-Based Drug Discovery for Disease Targets
- Virtual Screening Pipeline Development and Validation
- Protein-Ligand Interaction Analysis and Binding Mechanism Elucidation
- De Novo Drug Design and Scaffold Optimization
- Polypharmacology and Off-Target Prediction in Drug Candidates

Surface Plasmon Resonance Biosensing

- SPR Sensor Development and Optimization
- Protein-Ligand Interaction Kinetics Analysis
- Label-Free Biomarker Detection Method Development
- Surface Chemistry and Functionalization Strategies
- Multi-Analyte SPR Array and Multiplexing Studies

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