

COMPUTER SIMULATION AND THEORY OF MACROMOLECULES

Hünfeld, April 28-29, 2023, Hybrid



Poster List, sorted by Number

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* For Abstract, see Section 1: List of Oral Contributions

Poster List, Hybrid Workshop, April 28-29, 2023

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#	Last Name, First Name	Poster Title	On-site	online
129	Badillo , Joel A.	Potential of Mean Force for the Acetylation of Glucose in Choline-Chloride Ethylene Glycol Deep Eutectic Solvent from QM/MM MD Simulations		X
133	Padmanaban , Rajashree	Interaction of Hydroxyapatite and TLR-4 Using In Vitro and In Silico Approaches		X
142	Kolář , Michal H.	Gating of the Ribosome Exit Tunnel by Constriction-Site Proteins	X	X
158	Cofas-Vargas , Luis Fernando	Molecular Basis for FOF1-ATP Synthase Allosteric Drug Development: Aurovertin Binding Site		X
159	Munguía Salazar , Paloma	F1 sector of the F1Fo-ATP Synthase of Staphylococcus Aureus: Conformational Characterization and Inhibitor Development		X
163	Velarde , Marco Vinicio	Comparison of Different Force Fields in the Determination of the Excess Chemical Potential of Thiophene in the [C4MIM] [BF4, Cl, Br, CH3COO] ILs		X
183	V. Guzman , Horacio	Quantitative Electrostatic Force Tomography for Proteinaceous Capsids in Interaction with an Approaching Nanoscale Substrate	X	
195	Scherer , Katharina	Effect of Transmembrane Domains on the Free Energy of Stalk Formation during Membrane Fusion	X	X
200	Matthes , Dirk	Interactions of Anle138b with α -Synuclein Fibrils in the Presence of Phospholipids	X	X
202	Aldakul , Yessenbek	Investigation of Non-Canonical Voltage-Sensing Mechanism in K2P Channels Using Molecular Dynamics Simulations	X	X
207	Szöllösi , Daniel	Investigation of the Altered Folding Kinetics of the N-terminal Transactivation Domain of p53 due to the Mutation P27A	X	X
218	Riedmiller , Kai	Predicting Reaction Barriers of Hydrogen Atom Transfer in Proteins	X	X
221	Acharya , Abhishek	L3 Loop Mediated Translocation of Charged Molecules Through the OmpF Channel	X	X

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#	Last Name, First Name	Poster Title	On-site	online
232	Kambaine , Naserian	Conformations and Stability of Capsaicin in Bulk Solvent: A Molecular Dynamic (MD) Simulation Study		X
236	Jung , Hendrik	"asyncmd" - A Python Library for Parallel Setup, Control and Analysis of Molecular Dynamics Simulations	X	X
239	Ping , Xiaofei	Coarse-Grained Simulation Model of TDP43 Liquid-liquid Phase Separation Behavior	X	X
240	Das , Chandan K.	Computer Simulations of Porphyrin-Based Nanomachines	X	X
245	Palacio-Rodriguez , Karen	Estimation of Kinetic Rates and Collective Variable Quality From Time-Dependent Biased Simulations	X	X
247	Qian , Xuliang	Molecular Mechanisms of a Novel Insect Cuticle Peptide-Based Nano-Capsule Platform		X
248	Mukherjee , Saumyak	Molecular Thermodynamics of Protein Condensate Formation from All-Atom MD Simulations	X	X
268	Lytje , Kristian	Combining MD and SAXS in Rigid-Body Optimizations	X	X
272	Fatafta , Hebah	The Effects of Lipid Binding, Neuronal Membrane, Oxidative Stress and Molecular Crowding on Amyloid Aggregation	X	X
275	Martínez-León , Alejandro	Overcoming Hysteresis in Ligand Binding Potential of Mean Force Calculations	X	X
283	Sohraby , Farzin	Characterization of Ligand Unbinding Mechanisms and Kinetics for NiFe Hydrogenase Mutants Using τ RAMD	X	X
296	Monego , Debora *	Size-dependent Sedimentation of Nanocrystals: The Role of the Ligand Shell Structure		X
298	Claveras Cabezudo , Ainara	Scaling Protein-Water Interactions in the Martini 3 Coarse-Grained Force Field to Simulate Transmembrane Helix Dimers in Different Lipid Environments	X	X

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#	Last Name, First Name	Poster Title	On-site	online
299	Schäfer, Stefan	Atomistic Molecular Dynamics Simulations of Gasdermin Pores	X	X
300	Maihöfer, Michael	Bayesian Methods for Fluctuation X-Ray Scattering	X	X
303	Chatzimagas, Leonie	Simulation of Liquid Jet Explosions and Shock Waves Induced by X-Ray Free-Electron Lasers	X	X
306	Sritharan, Sujith	Molecular Modeling of Plasmodesm Organization by MCTP Proteins	X	X
314	Schultze, Steffen	Bayesian Structure Determination of Multiple Conformational Structures from Single-Molecule X-ray Scattering Images	X	X
316	Briand, Eliane	Constant pH Molecular Dynamics in GROMACS using λ -dynamics and the Fast Multipole Method	X	X
318	Leidner, Florian	Regulation of the Fungal Fatty Acid Synthase Through Conformational Selection	X	X
329	Schäffner, Malte	Conditions for the Occurrence of Michaelis-Menten Kinetics in Markov Models	X	
331	Hui, Chenggong	Potassium Channel Force Field Development Using ab Initio MD	X	X
332	Kalutskii, Maksim	Multiscale Mechanochemical Model of Microtubule Dynamics	X	X
333	Boushehri, Saber	Effect of O-Glycans on Structure and Friction of the Intrinsically Disordered Synovial Joint Protein Lubricin	X	
334	Kozlowski, Nicolai	Evaluation of the CHARMM36m Force Field Combined with the OPC Water Model for Protein Simulations	X	X
336	Kasparyan, Gari	Electroporation: Free Energy Landscape and Methods for Imposing Transmembrane-Potentials	X	X
337	Rennekamp, Benedikt	How Collagen is Designed to Tame its Radicals	X	X
344	Chen, Yixin *	A Minimal Markov Model for Rotary Catalysis of F1-ATPase		X

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#	Last Name, First Name	Poster Title	On-site	online
368	Brosz , Matthias	Martini 3 Coarse-Grained Force Field for Collagen	X	X
381	Schmidt , Lisa	Active vs Inactive - Using Alchemical Free Energy Simulations to Probe Stabilizational Effects within the Human Dopamine 2 Receptor	X	X
391	Lam , Chun Kei	Ion Conduction Mechanisms in Potassium Channels Revealed by Permeation Cycles	X	X
394	Forget , Selene	Impact of Conformational Shifts on the Hairpin Ribozyme Reactivity	X	X
406	Bodosa , Jessica	Metadynamics Study of Benzyltrimethylammonium Binding Free Energy to Emre Protein		X
408	Castillo Tarazona , Marcia Yineth	Understanding the Interaction Between Gold Nanoparticles Functionalized with Amino Acid Derivatives and Proteins with Positively Charged Residues.		X
414	Heinz , Frederick	Structure and Dynamics of a Biomimetic Hydrogel: Coiled-Coil Monomers Self-Assemble into Chains	X	X
419	Teuffel , Jonathan	Effects of Conformational Transitions and Redox Protein Binding on the Catalytic Properties of Cytochrome P450s Revealed by Ligand Egress Patterns	X	X
421	Chavarria Rivera , Joel	Free Energies of Stalk Formation - Comparison between All Atomistic and Martini Simulations	X	X
432	Versini , Raphaëlle	Molecular Dynamics Based Prediction of Fzo1's Transmembrane Domains Structure	X	X
437	Schäfer , Joana-Lysiane	Rare Event Simulation for Bioactive Peptides	X	X
442	Shylendran , Ardhra	Ion-Cluster Morphology and Impact on the Structure and Dynamics of Diglyme Based Sodium-Ion Battery Electrolyte - A Molecular Simulation Study		X
452	Rauda-Ceja , Jesus Antonio	Cavity Hydration in MUP-1 and Influence on Nonclassical Hydrophobic Effect		X

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#	Last Name, First Name	Poster Title	On-site	online
458	Ali, Ahmed	Allosteric Communication in Photoswitchable PDZ3 Domain	X	X
460	Sorout, Nidhi	Effects of Boron Nitride Nanoparticles and Selected Osmolytes on the Secondary Structure of A β -Peptide in Aqueous Medium: Prevention of β -Sheet Formation.	X	X
464	Buhr, Jannik	KIMMDY 2.0: A Kinetic Monte Carlo Reactive Molecular Dynamics Framework	X	X
465	Gabrielli, Sara	Conformational Dynamics of Elongation Factor G: Looking for Unresolved Intermediates in Ribosomal Translation	X	X
466	de Maeyer, Annke	Viral mRNA Secondary Structures Affect the Thermodynamics of Frameshifting	X	X
470	Dorbath, Emanuel	Hierarchical Dynamics as Result of Log-Periodic Oscillations in Proteins	X	X
473	Heß, Lisa-Marie	Base-Pair Free-energy Differences Estimated from Frameshifting Efficiencies for SARS Coronavirus	X	X
476	Jones, Jesse	Simulations of the Proton Exit Channel in Cytochrome c Oxidase	X	X
479	Tusha, Gers	Exploring the Reactivity of Supramolecular Helicates as Confining Catalysts	X	X
480	De Vecchis, Dario	The Functional Interplay of the ABC Transporter Pgp with its Lipid Substrates	X	X
488	Shakibi, Saber *	A One-Bead-Per-Saccharide (1BPS) Model for Multiscale Modelling of the Brain ECM		X
491	Kim, Hyuntae (Henry)	Unexpected Challenges in Molecular Dynamics Simulations of Large Systems	X	X
492	Nagy, Gabor	Role of disordered regions beyond the binding motif of the Measles virus NTAIL	X	X
494	Gaurav, Kumar	Multiscale Simulations of Molecular Recognition by Phase Separated Mut-16: A Scaffolding Protein of Mutator Foci	X	X
495	de Vries, Reinier	Gating Transitions in the MthK Potassium Channel	X	X

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497	Mendez Otalvaro , Edward Francisco	Pharmacological Modulation of Trek1 Channel	X	X
503	Farcas , Alexandra	Computational Design Optimization of Nanoparticle Based Delivery Vectors for the CRISPR/Cas9 System		X
518	Stuke , Jan Felix Maximilian	SUMO in Dense Protein Solutions	X	X
523	Torres Constante , Karen Odalys	Characterizing the Transport Pathway of ABCG36 Substrates Using Metadynamics	X	X
524	Pietrek , Lisa Maria	Structural Ensembles of Disordered Proteins and RNA from Hierarchical Chain Growth	X	X
525	Finn , Lauren	Investigating Allostery of a Bacterial Toxin	X	X
527	Zschau , Richard	Mechanism of Beta-Hairpin Formation in Azochignolin	X	X
528	Diez , Georg	Comparing Correlation Measures to Study Protein Dynamics	X	X
534	Hegedus , Tamas	Modeling the Soluble and Membrane-Bound Conformations of Syntaxin 17 SNARE Proteins	X	X
535	Scherlo , Marvin	Structural Insights into Conformational Changes During Protein Aggregation and Refolding by Combining Theoretical and Experimental Infrared Spectroscopy of Amid Bands	X	X
538	Gunes , Sude	In Silico Identification of Potential Ligand Binding Sites of Galactokinase 1 (GALK1) to Treat Classic Galactosemia		X
541	Jäger , Miriam	Finding Unbinding Pathways in the A1 and A2 Adenosine Receptor Combining Targeted MD and Leiden Clustering	X	X
543	Leitmann , Katharina *	Refining Active Sites of Proteins to Sub-Ångström Resolution by Combining Theoretical and Experimental Infrared Spectroscopy		X
545	Reboul , Etienne	In Silico Study of Protease Activated Receptor 1 (PAR1) and Thrombin Receptor Activator Peptide 6 (TRAP-6)	X	X

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546	Ezat , Ahmed	Study of The Binding Site Dynamics, Druggability and Cryptic Pocket Formation in Different Human Coronaviruses' Main Protease (Mpro)		X
547	Kopec , Wojciech	Identification of Metastable States of a Large-Conductance Mechanosensitive Channel (Mscl) Using Enhanced Sampling Methods		X
555	Althoff , Philipp	Tracking Water Molecules and Ions: Investigating Channelrhodopsin Gate Opening with Molecular Dynamics Simulations	X	X
556	Post , Matthias *	Path Separation of Dissipation-Corrected Targeted Molecular Dynamics Simulations of Protein-Ligand Unbinding		X
557	Sartore , Sofia	Importance of Feature Selection for Markov State Models: A Case Study on HP35	X	X
559	Jana , Kalyanashis	Demonstrating the Function of the Surface-Exposed Lipoprotein BtuG in Efficient B12 Transport in Association with the Outer-Membrane BtuB Protein	X	X
560	Böckmann , Rainer	mRNA Lipid Nanoparticle Phase Transition	X	X
573	Jamal , Sehrish	Computational Structure Modelling and Dynamics of Influenza Encoded Viroporin in Host Lipid Membrane System	X	X
576	Kuntze , Ricarda	Exploration of Ion Permeation in the Gramicidin A Channel Using a Charge Scaling MD Approach	X	X
581	Goeppert , Simone	Peptide Binding in MHC Receptors	X	X
582	Ramírez , Marco	Conformational Selection in the CBD Domain of Cre Recombinase		X
583	Kohnke , Bartosz	GROMACS Meets FMM - The Path to Highly Scalable Constant pH Electrostatics	X	X
586	Barbieri , Mariano	Reinforcement and Competition Between RNAPolIII-Enhancer-Promoter Contacts and Cohesin-CTCF Loop Extrusion	X	X

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588	Öztürk , Mehmet Ali	ReverseDock: A Web Server to Dock a Single Ligand to Multiple Protein Targets		X
590	Popov , Cristian	Role of Receptor-Receptor Interaction as Checkpoint in Immune Signaling	X	X
591	Sucerquia , Daniel	How a Stretching Force Differently Destabilizes Chemical Bonds on a Protein Backbone	X	X
593	Trollmann , Marius F. W.	One Ring to Rule Them All: Lugdunin’s Disruptive Effects	X	X
596	Stelzl , Lukas	From the Integrative Atomic Resolution Ensembles of Disordered Proteins to Simulations of Phase Separated Condensates	X	
606	Atik , Seref Berk	Computational Analysis of the Interaction of HIV-1 Capsid and Nanobody Complex Structure with a Potential for Diagnostic Applications		X
607	Aponte-Santamaría , Camilo	Energetics and Permeation of Small Molecules Used for 3D-Laser Printing Across Biological Lipid Bilayers	X	X
774	Beierlein , Frank	DNA-Repair Mechanisms: Molecular Simulations and Computational Alchemy		X
810	Stachowicz-Kusnierz , Anna	Molecular Dynamics Study of Interactions between Nanoplastics and Lipid Membranes		X

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