European Conference on Computational & Theoretical Chemistry

"Exploring Molecular Space"

Presented by the
Division of Computational
and Theoretical Chemistry

Olympic Museum Thessaloniki, Greece August 27-31, 2023

www.euchems-compchem.eu





PROGRAM

European Conference on Computational & Theoretical Chemistry

Thessaloniki, August 27-31, 2023



Welcome

Dear colleagues,

On behalf of the European Chemical Society, I wish you a warm welcome to CompChem2023.

The European Chemical Society – in short EuChemS – is an overarching society at the European level with 50 national chemical societies and other organisations as members. Our mission is to nurture a platform for scientific discussion and provide an unbiased European voice on key policy issues in chemistry and related fields. In this way, EuChemS represents approximately 130,000 chemists from all over Europe.

Did you ever realize that by being a member of your national chemical society, you are a member of EuChemS too? If you are interested to learn more about EuChemS, feel free to sign up for our monthly newsletter EuChemS Magazine (www.magazine.euchems.eu), where we share information that is relevant for you.

The themes of this conference, ranging from Artificial Intelligence in Chemical Research to Computational Chemistry in Industry, are crucial in contemporary chemistry. In this field, it is especially important to remain on the cutting edge of innovative research – and occasions like this ensure the exchange of pioneering ideas. Therefore, I wish to express my gratitude to the EuChemS Division of Computational and Theoretical Chemistry for setting up such a wonderful conference.

While I have to remain in the Netherlands, I sincerely hope that you will participate in numerous exciting conversations, facilitate knowledge exchange, and make new connections with your colleagues in the field of computational chemistry and beyond in beautiful Thessaloniki.

I wish you a very enjoyable conference!

Floris Rutis

Floris Rutjes
President of the European Chemical
Society (EuChemS)

Dear colleagues,

On behalf of the Association of Greek Chemists, I welcome you to Thessaloniki and to the CompChem2023. The Association of Greek Chemists (AGC) is a scientific organization representing all Chemists in Greece and is member of the European Chemical Society and member of the chemical societies comprising Chemistry Europe.

AGC was founded in 1924 and since then has grown substantially, comprising at the moment of AGC has built a tradition in organizing international conferences, among which are the divisional conferences of EuChemS. In 2019, AGC has organized the 17th International Conference on chemistry and the Environment, which is the conference of the division of Chemistry and the Environment, in 2021 the conference on Green and Sustainable Chemistry, namely the conference of the Division of Green and Sustainable Chemistry, and this year the 14th European Conference on computational and theoretical chemistry.

We are therefore grateful to our members and delegates to the EuChemS divisions for taking such initiatives and organizing such high-profile events in our country.

This conference will serve as a platform for scientists to highlight their recent research findings in theoretical and computational chemistry, which certainly find applications to all other aspects of chemistry and other sciences as well. From this perspective, it will be a very stimulating conference for all chemists and I hope that several scientists from all over the world will attend. I wish to every participant an exciting and intriguing conference, full of interesting talks and fruitful discussions and I hope that you will find some time to discover the beauties and the history of Thessaloniki and Northern Greece.

Sincerely,

loannis Katsoyiannis
President of the Association

of Greek Chemists

European Conference on Computational & Theoretical Chemistry

Thessaloniki, August 27-31, 2023



Welcome

Dear Colleagues and Friends,

It is a pleasure to welcome you to the EuChemS CompChem 2023, the flagship event of the European Chemical Society Division of Computational and Theoretical Chemistry (DCTC) from Sunday 27th August to Thursday 31st August, 2023, which takes place the Olympic Museum of Thessaloniki, Greece under the auspices of the Association of Greek Chemists.

EuChemS CompChem 2023 addresses key areas in computational and theoretical chemistry:

- Electronic Structure: Theory and Applications
- Artificial Intelligence in Chemical Research
- Materials Design
- Biomolecular Systems
- Computational Chemistry in Industry

Computational and theoretical chemistry have revolutionized the study of molecular events, the design and characterization of new materials, and the discovery of new drugs. The steady and consistent development of new theoretical methods and algorithms, access to massive compute resources, and breakthroughs in the processing of data using Al approaches allows the prediction of molecular properties at a level of accuracy required in industrial research, bringing computational chemistry to a new era.

We are particularly thrilled that the conference received an overwhelming response with over 300 participants from 33 countries, presenting 5 Keynote Lectures, 16 Invited Lectures, 40 Invited Contributions, 22 Short Communications, and 182 Poster Presentations contributing to a rich scientific program. The first day of the conference also features Opening Lectures by Prof. Michele Parrinello, Gold Medalist EuChemS 2020; Prof. Silvia Osuna, EuChemS Lecturer 2022, and our very own Chair of EuChemS-DCTC 2017-2022, Prof. Péter G. Szalay.

EuChemS CompChem 2023 presents the inaugural EuChemS Walter Thiel Award, an award recognizing biennially the outstanding scientific contributions of a young researcher based in a country affiliated to the EuChemS. The award is cosponsored by Chemistry Europe, the German Chemical Society, the Swiss Chemcial Society, and the Max Planck Institut für Kohlenforschung. The inaugural award is presented to Dr. Felix Plasser of Loughborough University, UK. The Organizing Committee of EuChemS CompChem 2023 will also present a Lifetime Achievement Award to Prof. Hans Lischka. Moreover, three awards for outstanding poster presentations in each of the thematic sessions, as well as best contributed talk awards for outstanding contributed presentations will be given. Six fellowships to attend the EuChemS CompChem 2023 were granted as free registration fees to support students or early career scientists, kindly sponsored by CCP-BioSim.

Finally, I would like to extend our special thanks to the members of the organizing committee, who have worked tirelessly for the past year so that we can all be here today; to our scientific committee for ensuring the highest scientific standards; to our local organizing committee for tending to all meeting details; to EuChemS and the Association of Greek Chemists for providing the platform to organize this conference; to our DCTC delegates for engaging their local communities; to our sponsors for the financial assistance; to our media sponsors for disseminating the event; and last but not least to all of you for making this conference a success!

We are looking forward to an exciting EuChemS CompChem and wish you an enjoyable time at the historical and beautiful city of Thessaloniki.



Zing Kofon

Dr. Zoe Cournia

Chair, 2023 European Conference on Computational and Theoretical Chemistry Treasurer, EuChemS DCTC

Senior Investigator, Biomedical Research Foundation Academy of Athens



Organizing Committee



Hans Peter Lüthi co-Chair EuChemS Comp Chem 2023 Treasurer of EuChemS Executive Board Member, Swiss Chemical Society, Switzerland



Ioannis Katsoyiannis
President, Association of Greek Chemists
Assoc. Professor, Laboratory of Chemical and Environmental Technology,
Department of Chemistry, Aristotle University of Thessaloniki, Greece



Tanja van MourikPresident, EuChemS DCTC
Reader, School of Chemistry, University of St Andrews, UK



Péter G. Szalay Immediate Past President, EuChemS DCTC Professor, Institute of Chemistry, ELTE Eötvös Loránd University, Hungary



Peter Reinhardt Secretary EuChemS DCTC Assist. Professor, Faculty of Sciences Sorbonne University, Paris, France



Stefan M. Kast
President of Division "Computers in Chemistry", German Chemical Society
Professor, Department of Chemistry and Chemical Biology,
TU Dortmund University, Germany

European Conference on Computational & Theoretical Chemistry

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Local Organizing Committee

Michail Sigalas

Professor and Director, Laboratory of Quantum & Computational Chemistry, Department of Chemistry, Aristotle University of Thessaloniki

Andreas Koutselos

Professor and Director, Laboratory of Physical Chemistry, Department of Chemistry, National Kapodistrian University of Athens

Nasos Papadopoulos

Professor, Department of Nutritional Sciences and Dietetics, International Hellenic University Treasurer, Association of Greek Chemists

Jannis Samios

Professor of Physical Chemistry, Emeritus; Former Director, Physical Chemistry Laboratory, Department of Chemistry, National Kapodistrian University of Athens

Victoria Samanidou

Professor of Analytical Chemistry, Department of Chemistry, Aristotle University of Thessaloniki, President of the Steering Committee, ΠΤΚΔΜ Chapter, Association of Greek Chemists

Kostas Karatasos

Professor, Section of Chemistry, Physical Chemistry Lab, Department of Chemical Engineering, Aristotle University of Thessaloniki

Ioannis Vafeiadis

Special Secretary, Association of Greek Chemists

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Professor, Babeș-Bolyai University, Romania

Claudio Greco

Professor, University of Milano - Bicocca, Italy



14:00-16:00	Registrations		
16:00	Opening Remarks		
	 Zoe Cournia, Chair EuChemS Comp Chem 2023; Treasurer of EuChemS DCTC; Senior Researcher Biomedical Research Foundation Academy of Athens, Greece Ioannis Katsoyannis, President of the Association of Greek Chemists; Assoc. Professor, 		
	Laboratory of Chemical and Environmental Technology, Department of Chemistry, Aristotle University of Thessaloniki, Greece		
		Lüthi, co-Chair EuChemS Comp Chem 2023; Treasurer of EuChemS; Executive Board viss Chemical Society	
	• Tanja van N St Andrews	Mourik, President of EuChemS DCTC; Reader, School of Chemistry, University of , UK	
	 Michail Sigalas, Professor and Director, Laboratory of Quantum and Computational Chemistry, Department of Chemistry, Aristotle University of Thessaloniki 		
	Opening Session Chair: Zoe Cournia		
	16:30	Opening Lecture: Michele Parrinello, Italian Institute of Technology, Italy Gold Medalist EuChemS 2020 The physics of catalysis	
16:30-18:15	17:15	Chemistry Europe Lectureship: Silvia Osuna, University of Girona, Spain EuChemS Lectureship 2022	
		Computational enzyme design: Towards the development of fast yet accurate approaches	
	17:45	IL: Péter G. Szalay, ELTE Eötvös Loránd University, Institute of Chemistry Immediate Past President EuChemS DCTC	
		Ab initio fragment models for accurate excimer potential energy surfaces	
18:15	Coffee Tea Break		
	EuChemS Walter Thiel Award Ceremony & Award Lecture Chair: Hans Peter Lüthi		
		Walter Thiel Award Ceremony	
18:35-19:30	18:35-18:45	Hans Peter Lüthi, EuChemS Treasurer, Swiss Chemical Society Tanja van Mourik, President EuChemS DCTC Sarah-Lena Gombert, MPI KoFo Péter G. Szalay, Immediate Past President EuChemS DCTC	
	18:45-19:30	Walter Thiel Award Lecture: Felix Plasser, Loughborough University, UK	
		New Analysis Tools for Excited-State Quantum Chemistry: From Numbers to Chemical Insight	
19:30	Welcome Apéro		

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Monday August 28, 2023

	Electronic Structure: Theory and Applications Chair: Péter G. Szalay		
	08:45	KL: Katarzyna Pernal, Lodz University of Technology, Poland	
	00.43	Beyond-active-space electron correlation for molecules in excited states	
08:45-10:30		IL: Sandra Luber, University of Zürich, Switzerland	
	09:30	Pushing the boundaries for computational spectroscopy and excited states in the condensed phase	
		IL: Marie-Liesse Doublet, ICGM - CNRS, France	
	10:00	Materials for Energy Storage: Challenges and Related Issues	
10:30	Coffee T	ea Break	
	Electronic	Structure: Theory and Applications	
	Chair: Pét	er G. Szalay	
	44.00	IL: Sotiris Xantheas, Pacific Northwest National Lab, USA	
	11:00	The Many-Body Expansion in Chemistry	
		IL: Demeter Tzeli, National and Kapodistrian University of Athens, Greece	
	11:30	Electronic Structure and Chemical Bonding in systems containing of transition metals	
11:00-13:10		IC: Jan Martin, Weizmann Institute of Science, Israel	
	12:00	Basis set convergence of post-CCSD(T) corrections to high-accuracy thermochemistry reconsidered: the power of lambda	
	42.20	IC: Herbert Fruchtl, University of St Andrews, UK	
	12:20	Flick the switch – a candidate molecule for molecular electronics	
	12:40	IL: Hans Lischka, Texas Tech University, USA DCTC Lifetime Achievement Award	
		Solvent-enhanced symmetry-breaking induced by low-frequency vibrations in the covalently bound tetracene dimer leading to singlet-fission	
13:10-14:30	Lunch		
	Materials Chair: Me	Design ercè Deumal	
		KL: Jacqueline Cole, Department of Physics, University of Cambridge, UK	
	14:30	Data-Driven Materials Discovery	
	15:15	IL: Benoît Champagne, University of Namur, Belgium	
14:30-16:25		Predicting the Second-Order Nonlinear Optical Responses of Organic Materials in Complex Environments: The Role of Dynamics	
	15:45	IC: Cristina Trujillo, University of Manchester, UK	
		In Silico Design in Organocatalysis	
	16:05	IC: Carles Bo, ICIQ, Spain	
		New graph-based tools for taming complex reaction networks	
16:25-17:00	Coffee T	ea Break	

Monday August 28, 2023



17:00-17:50	Materials Chair: Rad	Design Iu Silaghi-Dumitrescu	
	17:00	IL: Maria João Ramos, University of Porto, Portugal	
		Biodegrading Plastic	
		IC: Anton Stasyuk, University of Girona, Spain	
	17:30	Aromaticity controls the photoinduced electron transfer in host-guest complexes of nanohoops	
		nmunications	
	Chairs: Pe	ter Reinhardt, Radu Silaghi-Dumitrescu	
	Electronic Structure: Theory and Applications		
		SC: Eline Desmedt, Vrije Universiteit Brussel, Belgium	
	18:00	Designing Nonlinear Optical Redox Switches with Inverse Molecular Design: the Synergy between Core-modifications and Meso-substitutions	
	10.05	SC: Marco Mendolicchio, Scuola Normale Superiore, Italy	
	18:05	New Challenges in Computational Spectroscopy	
		SC: Josianne Owona, Donostia International Physics Center, Spain	
	18:10	Theoretical modelling of mechanoluminescent properties of pyridylvinylanthracene	
		crystals SC: Nora Gildemeister, University of Cologne, Germany	
	18:15	Modelling charge transport properties of dipolar self-assembly merocyanines: the role of static and dynamic disorder	
		SC: Jordan Rio, Université Claude Bernard Lyon 1, France	
18:00-18:50	18:20	Unveiling the Dynamic Structure of Organozincs in THF: Elucidating solvent effects with Molecular Dynamics and X-Ray Absorption Spectroscopies	
	Materials Design		
		SC: Pierre Beaujean, University of Namur, Belgium	
	18:25	Ruthenium Complexes as a Test System to Unravel the Symmetry Effects on the Second-Order Nonlinear Optical Responses of Molecular Switches	
		SC: Manuel Pérez Escribano, Universidad de Valencia, Spain	
	18:30	Computational study into the formation of tin halide perovskite nanostructures	
	18:35	SC: Anthony Payne, University of Surrey, UK	
		Growth and reactivity of Hexagonal Boron Nitride	
		SC: Jakob Brauer, University of Bremen, Germany	
	18:40	Deducing desirable properties of porous materials for the adsorption of complex organic molecules by employing an efficient hierarchical screening approach	
	18:45	SC: Lyuben Borislavov, Bulgarian Academy of Sciences, Institute of General and Inorganic Chemistry, Bulgaria	
		Cheminformatics-Aided Prediction of Degradation Reaction Products in Energy Storage Materials	
18:50-20:30	Poster Ses	ssion I	

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Tuesday August 29, 2023

		nal Chemistry in Industry el Edmund Beck	
08:45-11:00	08:45	KL: Tobias Morawietz / Sadra Kashe Ol Gheta, Bayer AG, Pharmaceuticals R&D, Computational Molecular Design, Germany	
	U8:45	AIQU: Bridging Artificial Intelligence and Quantum Chemistry for Improved Molecular Property Prediction in Industrial R&D	
		IL: Christoph Riplinger, FAccTs GmbH, Germany	
	09:30	Deciphering key interactions of ligand binding to biomolecular targets using high-level quantum mechanical methods IC: Miles Pemberton, AstraZeneca, UK	
	10:00	Predicting the Future of our Medicines: Applying AI/ML to Investigate the Link Between Molecular Structures and their Transcriptomic Signatures	
		IC: Albert Sabadell-Rendón, ICIQ – Institute of Chemical Research of Catalonia, Spain	
	10:20	AMUSE - Automated MUltiscale Simulation Environment	
		IC: George Fanourgakis, Aristotle University of Thessaloniki, Greece	
	10:40	Machine Learning as a tool for predicting gas adsorption by Metal Organic Frameworks	
11:00-11:20	Coffee Tea	Break	
	Computation	nal Chemistry in Industry el Edmund Beck	
	Criair. Iviiciia		
	11:20	IL: Maria Jose Aliaga Gosalvez, Software for Chemistry & Materials BV (SCM), Netherlands	
		Collaborating with SCM: (Horizon Europe) opportunities IL: Matthew Bone, Bristol Composites Institute, University of Bristol, University Walk,	
11:20-13:00	11:50	Bristol, UK	
		High Throughput Modelling of Polymers with Molecular Dynamics and Machine Learning IC: Froze Jameel, Max Planck Institute for Dynamics of Complex Technical Systems, Germany	
	12:20	Solvent Design for Green Homogeneous multi-phase Industrial Reactions	
	12:40	IC: Parvathi Krishnakumar, University of Limerick, Ireland Predicting Thermodynamic Properties of Novel Compounds from their Starting Materials	
		reducting Thermodynamic Properties of Novel Compounds from their Starting Materials	
13:00-14:30	Poster Session II		
13:00-14:30	Lunch		
	Discovering	Thessaloniki	
14:30-16:30	Board Meeting, EuChemS Division of Computational and Theoretical Chemistry (Seminar Hall, Olympic Museum of Thessaloniki)		
	Materials De Chair: Merce		
	46.00	IC: Colm Burke, University of Liverpool, UK	
16:30 -17:50	16:30	High-throughput atomistic modelling of semiconducting polymers	
		IC: Irene Casademont Reig, Vrije Universiteit Brussel, Belgium	
	16:50	Manipulating Excited Estates using Inverse Design	
	17:10	IC: Julian Holland, University of Southampton, UK	
		Modelling LLZO: Limiting Structures in a Near-unlimited Configuration Space	
		IC: Ioannis Skarmoutsos, University of Ioannina, Greece	
	17:30	The unique structural features of water, ranging from ambient liquid up to supercritical, extreme-pressure conditions: Insights from classical and ab initio molecular dynamics simulations	
		-	

Tuesday August 29, 2023



17:50-18:00	Short Break		
	Short Communications		
	Chair: Stefan	n Kast	
	Biomolecular Systems		
	18:00	SC: Charlotte Bouquiaux, University of Namur, Belgium	
		Investigating the influence of the lipid structure on the global membrane organization: effect of the fatty acids	
	40.05	SC: Ho Ting Henry, University of Oxford, UK	
	18:05	Substrate Binding Dynamics of SARS-CoV-2 Cysteine Proteases	
		SC: Gianmarco Lazzeri, Frankfurt Institute for Advanced Studies, Germany	
	18:10	Reconstructing Rare Event Kinetics Using Al-enhanced Unbiased Molecular Dynamics Simulations	
	40.45	SC: Carlos Sequeiros-Borja, Adam Mickiewicz University, Poland	
	18:15	Water will find a way: transport through narrow tunnels and its significance in enzymes	
		SC: Andrea Levy, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland	
	18:20	Addressing Challenges in Computational Simulations of Covalently Binding Transition Metal-Based Drugs	
18:00-19:05	Artificial Intelligence in Chemical Research		
		SC: Hannes Kneiding, University of Oslo, Norway	
	18:25	Machine Learning Quantum Properties of Transition Metal Complexes with Natural Quantum Graphs	
	18:30	SC: Elliot Farrar, University of Bath, UK	
	18.30	Machine learning and semi-empirical calculations: A synergistic approach to rapid, accurate, and mechanism-based reaction barrier prediction	
	18:35	SC: Edoardo Cignoni, University of Pisa, Department of Chemistry and Industrial Chemistry, Italy	
		Machine Learning Exciton Hamiltonians in Light-Harvesting Complexes	
	18:40	SC: Frédéric Celerse, École Polytechnique Fédérale de Lausanne (EPFL), Switzerland	
	18:40	Machine learning potentials for simulating solvent-assisted reactions	
		SC: Eugen Hruška, Charles University, Czech Republic	
	18:45	Bridging the explicit solvation experiment-calculation divide with machine learning and high-throughput simulation	
	Materials Design		
	18:50	SC: Edoardo Donadoni, University of Milano-Bicocca, Italy	
		Multi-scale modeling of folic acid-functionalized TiO ₂ nanoparticles for active targeting of tumor cells	
19:05-20:30	Poster Session III		

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Wednesday August 30, 2023

08:45-10:45	Biomolecular Systems Chair: Michael Otyepka		
	08:45	KL: William Jorgensen, Department of Chemistry, Yale University, USA Evolution of Free-Energy Calculations	
	09:30	IL: Kennie Merz, Michigan State University, USA Molecular Gas Phase Conformational Ensembles	
	10:00	IC: Danai Maria Kotzampasi, Biomedical Research Foundation Academy of Athens, Greece Insights into the mechanism of the C-terminal PIK3CA activating mutations	
	10:15	IL: Klaus Liedl, University of Innsbruck, Austria Antibody Structure and Dynamics in Solution	
10:45 - 11:15	Coffee To	ea Break	
	Biomolect Chair: Zoe	ular Systems Cournia	
	44.45	IL: Marco de Vivo, Istituto Italiano di Tecnologia, Italy	
	11:15	Function and inhibition of cation-coupled chloride cotransporters	
	11:45	IL: Chris Oostenbrink, University of Natural Resources and Life Sciences, Vienna, Austria Free energies and enhanced sampling from accelerated enveloping distribution sampling	
11:15-13:15	12:15	IC: Tobias Hüfner, Max-Planck Institute for Biophysics, Germany Automated and Systematic Derivati on of Parameter Type Definitions for Molecular Mechanics Force Fields	
		IC: Katie Kuo, Georgia Institute of Technology, USA	
	12:35	From Closed to Open: Addressing the Role of the Efflux Pump AcrAB-TolC in Antibiotic Resistance	
	12:55	IC: Dan Major, Bar-llan University, Israel	
		Screening Enzyme Mechanisms using Multiscale Mechanistic Docking with EnzyDock	
13:15-14:30	Lunch		
		ntelligence in Chemical Research ja Van Mourik	
	14.30	KL: Edward Pyzer-Knapp, IBM Research-Europe, UK	
	14.50	How Al accelerates the discovery of new molecules and materials	
14:30-16:25	15.15	IL: Ganna Gryn'ova, Heidelberg Institute for Theoretical Studies, Germany	
		New representations for interpretable chemical machine learning	
	15.45	IC: Amol Thakkar, IBM Research Europe, Switzerland	
		Multi-Cloud Data Infrastructure for AI Foundation Models in Chemical Research IC: Paul Katzberger, ETH Zürich, Switzerland	
	16.05	Graph Neural Networks as Implicit Solvents in MD Simulations	
16:25-17:00	Coffee To	ea Break	

Wednesday August 30, 2023



	Artificial Intelligence in Chemical Research Chair: Antti Poso		
	17:00	IC: Veronika Juraskova, University of Oxford, UK	
		Modelling Chemical Processes in Explicit Solvents with Machine Learning Potentials	
		IC: Elin Dypvik Sødahl, Norwegian University of Life Sciences, Norway	
17:00-18:20	17:20	Investigating molecular rotations in ferroelectric plastic crystals using machine learned force fields	
		IC: Marco Bortoli, University of Oslo, Norway	
	14:40	Development of Machine Learning Potentials for Main Group Organometallic Reagents	
		IC: Massimo Delle Piane, Politecnico di Torino, Italy	
	18:00	Machine Learning Approaches to Unravel the Dynamic Behavior of Metal Surfaces and Nanoparticles	
18:40-20:00	Poster Session IV		
20:00-21:00	Break		
21:00	Conference Dinner (Makedonia Palace Hotel, 2. M. Alexandrou Av)		

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Thursday August 31, 2023

	Biomolecular Systems Chair: Ivelina Georgieva		
	Chair. IVe	IC: Joep Wals, University of Antwerp, Belgium	
	08.40	Molecular Dynamics Simulations on UAMC-0001305 Warhead Derivatives to Theragnostically Target Fibroblast Activation Protein	
	09.00	IC: Stefano Serapian, University of Pavia, Italy	
09:40 10:20		Learning the Languages of Allostery in K-Ras4B	
08:40-10:20	09.20	IC: Dhiman Ray, Italian Institute of Technology, Italy	
		Data-Driven Classification of Ligand Unbinding Pathways and Kinetics	
		IC: Anastasia Rissanou, National Hellenic Research Foundation, Greece	
	09.40	A Computational Study of the Complexation of Single Stranded RNA with Lipid-based Agents	
		IC: Francesco Saverio di Leva, University of Naples Federico II, Italy	
	10.00	Free Energy Calculations in the Revival of Old-but-New Therapeutic Targets: Discovery and Development of RGD Integrin Peptides	
10:20-10:50	Coffee Tea Break		
	Biomolecular Systems Chair: Safiye Erdem		
		IC: Peter Starrs, University of St Andrews, UK	
	10:50	Molecular Dynamics Study of Arabinoxylan Polymer Flexibility with Forcefield Comparison	
	44.40	IC: Marketa Paloncyova, Palacky University Olomouc, Czech Republic	
10:50-12:10	11:10	Lipid Nanoparticles: From Structure to Interactions with Cell Membranes	
		IC: Matteo Capone, University of L'Aquila, Italy	
		Alternative Fast and Slow Primary Charge-Separation Pathways in Photosystem II	
		IC: Vassilios Myrianthopoulos, National and Kapodistrian University of Athens, Greece	
	11:50	Right tools for the job. Simple and sophisticated approaches for enhancing performance of in silico methodologies in drug discovery	
		: Structure: Theory and Applications er Reinhardt	
		IC: Bernardo de Souza, FAccTs GmbH, Germany	
12:10-13:10	12:10	On the importance of conformational Entropy when predicting Chemistry: results from the new Global Optimizer AlgoriThm (GOAT) implemented in ORCA	
		IC: Mario Piris, DIPC & EHU/UPV & IKERBASQUE, Spain	
	12:30	Time evolution of natural orbitals in ab initio molecular dynamics	
		IC: Adriana Pecoraro, University of Naples Federico, Italy	
	12:50	First-principles prediction of exotic hexagonal NaCl films on methylammonium lead iodide substrates, new hints for perovskite solar cells	
13:10-14:30	Lunch		

Thursday August 31, 2023



	Electronic Structure: Theory and Applications Chair: Péter G. Szalay		
	14:30	IC: Yannik Schütze, Helmholtz Zentrum Berlin für Materialien und Energie GmbH, Germany	
	14.30	Multiscale modeling of conjugated organosulfur polymer cathodes for lithium-sulfur batteries	
	44.50	IC: Aslihan Sumer, Saglik Bilimleri Universitesi, Turkey	
14:30-15:50	14:50	CO Oxidation on Molybdenum Oxide Clusters: Reaction Energetics and Mechanism	
		IC: Marc de Wergifosse, Université Catholique de Louvain, Belgium	
	15:10	The eXact integral simplified time-dependent density functional theory (XsTD-DFT)	
		IC: Örs Legeza, Wigner Research Centre for Physics, Hungary	
	15:30	Predicting the FCI energy of large systems to chemical accuracy from restricted active space density matrix renormalization group calculations via Hybrid CPU-GPU based architectures	
15:50	Awards Farewell		
16:30	End of Conference		
18:30-23:00	Optional visit to the Museum of Byzantine Culture, Thessaloniki (free entrance)		

European Conference on Computational & Theoretical Chemistry







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