

## List of posters of the poster session A

(first 73 posters are part of the poster competition presented by PhD students)

- PA1 **Aguirre, T. N.:** *Fast estimation of superconducting critical temperature of hydrogen-based binary and ternary systems*
- PA2 **Allgöwer, F.:** *How Light-Driven Redox Reactions Modulate Proton Transfer Barriers in Photosystem II*
- PA3 **Andersen, J.:** *Circular dichroism through the lens of coupled-cluster methods*
- PA4 **Audinet, T.:** *One dimensional model for relativistic quantum chemistry*
- PA5 **Bao, S.:** *Time-dependent Vibrational Electronic Coupled Cluster (VECC) theory for non-adiabatic dynamics*
- PA6 **Barcza, B.:** *New investigation of ab initio fragment models to study the excited states of interacting chromophores*
- PA7 **Bauer, M.:** *Excitonic Renormalization towards Modular Large-scale ab initio Electronic-structure Calculations*
- PA8 **Baumgarten, M.:** *Nonorthogonal and Overcomplete Hilbert Spaces for Quantum Monte Carlo Methods*
- PA9 **Belina, M.:** *Proton Transfer in the Pyrrole-Water System: Relaxation after Double Ionization*
- PA10 **Berrade, A. E. I.:** *Multi-Resonant TADF via N and B doped Triangulenes*
- PA11 **Bharadwaz, P.:** *Reactivity factors in catalytic methanogenesis and their tuning upon coenzyme F<sub>430</sub> biosynthesis*
- PA12 **Bonometti, L.:** *Diffusion Coefficient of Lithium in Cathode Materials for Lithium Ion Batteries from DFT, Metadynamics and Post-HF*
- PA13 **Bovolenta, G.:** *Comprehensive Quantum Chemistry Approach for the Evaluation of Binding Energies on Interstellar Ices. From the Water Dimer to Far-Reaching Surfaces.*
- PA14 **Briganti, V.:** *Uncertainty aware active learning for linear machine learning force fields*
- PA15 **Burgess, A.:** *A DFT+U-type functional to correct both self interaction error and static correlation error*
- PA16 **Carroll, L.:** *Self-organization, Restructuring and Reactivity: Computational Modelling of Catalysis on Nanoporous Gold using AIMD Simulations*
- PA17 **Cebreiro, A.:** *Calculation of the g-tensor with the RAS-CI method*

- PA18 **Chakraborty, R.:** *Embedding Pair Coupled Cluster Doubles-Based Methods in DFT*
- PA19 **Chaussy, L.:** *Spectroscopy of Copper-Superoxo Complexes: a Revival Based on Correlated Methods*
- PA20 **Chen, Y.:** *Multi-configurational nature of electron correlation within nitrogen vacancy centers in diamond*
- PA21 **Chirchir, G.:** *Electronic and Mechanical Properties of Re Doped  $\text{FeMnP}_{0.67}\text{A}_{0.33}$  ( $\text{A}=\text{Ga}$  and  $\text{Ge}$ )*
- PA22 **Chuiko, V.:** *A Size-Consistent Wavefunction Ansatz Built from Statistical Analysis of Orbital Occupations*
- PA23 **Cieśliński, D.:** *First-order symmetry-adapted perturbation theory for electronically degenerate states*
- PA24 **Cigrang, L.:** *Modelling photodissociation using non-adiabatic, on-the-fly quantum dynamics simulations*
- PA25 **Comas i Vilà, G.:** *Does Serial Femtosecond Crystallography Depict State-Specific Catalytic Intermediates of the Oxygen-Evolving Complex?*
- PA26 **Craciunescu, L.:** *Theoretical investigation of bimolecular collisions:  $\text{NO} + \text{CO}_2$*
- PA27 **Crisci, L.:** *Toward a black-box computation of accurate rate constants for barrierless processes: new hints for a challenging problem*
- PA28 **Csizi, K.-S.:** *Interactive quantum magnifying glass with quantum-classical hybrid models*
- PA29 **Csoka, J.:** *Analytic gradients for local density fitting Hartree-Fock and Kohn-Sham methods*
- PA30 **Cunha, R. D.:** *Multiscale investigation of the structural basis for photoacclimation in the cryptophyte alga PC577 and PE545 antenna complexes*
- PA31 **Danilov, D.:** *Spin-orbit coupling in an Ehrenfest non-adiabatic dynamics framework*
- PA32 **Deng, S.:** *Device simulation of high performance wet power for sunlight coordination under natural conditions*
- PA33 **de Lima, L. W.:** *Copolymerization of Carbon Dioxide and Cyclohexene Oxide by Bimetallic Homogeneous Catalysts: A DFT Study of its Reaction Mechanism*
- PA34 **Diaz, G. S.:** *How well do alternative formulations of Rowe's equation of motion perform for atomic and molecular transition energies?*
- PA35 **Didovets, Y.:** *Shape memory polymers – the role of hydrogen bonds: ab initio molecular dynamics simulations and energy decomposition analysis*

- PA36 **Ditte, M.:** *Non-covalent interactions obtained from quantum embedding of electronic system in charged quantum harmonic oscillators*
- PA37 **Di Grande, S.:** *The parameter-free junChS-F12 model: a cost-effective approach for accurate calculations of structural, spectroscopic and thermochemical molecular properties*
- PA38 **Dominguez, J.:** *An unexpected problem of astrochemical significance and a healing strategy*
- PA39 **Drontschenko, V.:** *Analytical Second Order Properties for the Random Phase Approximation: Accurate and Efficient Computation of Nuclear Magnetic Resonance Chemical Shieldings*
- PA40 **Dua, P.:** *Mechanism for CO<sub>2</sub> cycloaddition reaction using a tetranuclear 3d-4f helicates as an efficient catalyst: A DFT and ab-initio exploration*
- PA41 **Eduardus, E.:** *Towards Detection of The Molecular Parity Violation in Helical Ferrocene, Ruthenocene, and Osmocene*
- PA42 **Eeckhoudt, J.:** *Conceptual Density Functional Theory under Isotropic Pressure: Towards Diatomic Molecules*
- PA43 **Ergün, Ö.:** *Förster Resonance Energy Transfer Applied to Drug Design*
- PA44 **Fatkova, K.:** *Towards the Singlet Fission Quantum Yield*
- PA45 **Fauser, S.:** *Chemical Accuracy at Low Computational Cost with  $\sigma$ -Functionals for the Kohn-Sham Correlation Energy*
- PA46 **Feldmann, R.:** *Nuclear-Electronic Hartree-Fock Density Matrix Renormalization Group*
- PA47 **Filgas, J.:** *Nuclear Quantum Effects in Photochemical Reactivity*
- PA48 **Fitzpatrick, A.:** *Orbital Optimised Variational Quantum Eigensolver*
- PA49 **Fu, W.:** *Towards the ground state of molecules via diffusion Monte Carlo on neural networks*
- PA50 **Gastearena, X.:** *Computational study of the Lewis acid-catalyzed zwitterionic ring-expansion polymerization (ZREP) of monosubstituted epoxides*
- PA51 **Ge, Y.:** *Computational Method for Evaluating the Thermoelectric Power Factor for Organic Materials Modeled by Holstein Model: A Time-Dependent Density Matrix Renormalization Group Formalism*
- PA52 **Gerasimov, I.:** *A broad class of semi-local DFT ingredients from fractional calculus*
- PA53 **Gešvandtnerová, M.:** *Heterogeneous catalysis by acidic zeolites: DFT study of isobutanol to butenes transformations*

- PA54 **Giudetti, G.:** *AIMD-based protocol for modeling exciplex fluorescence spectra: OPPn example*
- PA55 **Glaser, N.:** *A DMRG-based framework for large-scale anharmonic vibrational calculations*
- PA56 **Goger, S.:** *Exploring the Interaction of Molecular Dipole Polarizability and Frontier Orbital Energies in Chemical Compound Space*
- PA57 **González, J. R.:** *Effect of the bridge between the two rings in biphenil-like systems in the dyson orbitals*
- PA58 **Gorges, J.:** *Quantum chemical calculation of mass spectra via automated transition state search*
- PA59 **Grazioli, L.:** *From Magnetic Circular Dichroism to Magnetic White Dwarfs: challenges in the calculation of properties in a magnetic field, using Coupled-Cluster and Unitary Coupled-Cluster Theory*
- PA60 **Greiner, J.:** *Exploiting Point Group Symmetry, Screening and Error Estimation in Many-Body Expanded Full Configuration Interaction*
- PA61 **Gutierrez-Cañas, M. L.:** *Solvent effects of choline and geranate-based ionic liquid on organic catalysts*
- PA62 **Györi, T.:** *Automated development of PESs via active learning: a real-world stress test of electronic structure theories and implementations?*
- PA63 **Haberhauer, J.:** *Investigation of a PLATICT system as potential molecular motor*
- PA64 **Halder, D.:** *Development of a compact ansatz for near term quantum algorithms*
- PA65 **Hasecke, L.:** *Deeper into the quantum realm*
- PA66 **Hennefarth, M.:** *Linearized Pair-Density Functional Theory*
- PA67 **Herok, C.:** *Describing (Di-)Anionic Species in Solution: A Benchmark Study*
- PA68 **Hillers-Bendtsen, A. E.:** *Probing the Ultrafast Photodynamics of Dihydroazulene with In Silico Time Resolved Photoelectron Spectroscopy and Ultrafast Electron Diffraction*
- PA69 **Hlavacova, R.:** *Prediction of solid-state properties of superheavy elements*
- PA70 **Hlinčík, A.:** *Theoretical study of Cr-Cr bonding interactions, the SIYNAQ case study*
- PA71 **Hou, X.:** *Epistatic Variations in the Omicron Receptor Binding Domain Can Enhance Host Recognition: An In Silico Assessment and Prediction*
- PA72 **Hou, Y.:** *Development of Machine Learning Potentials and Implementations of Molecular Dynamics and Infrared Spectra Simulations in MLatom*

- PA73 **Jadudová, D.:** *Photophysical properties of molecular fluorophores in carbon dots*
- PA74 **Aazaad, B.:** *Interstellar reaction mechanisms of Glycolaldehyde*
- PA75 **Abraham, V.:** *Estimating the accuracy of pseudopotential based GW method at different levels of self consistency using Gaussian orbitals*
- PA76 **Abulyaissova, L.:** *A Quantum Chemical Insight into Adsorption Interaction of PVA with Copper Oxide*
- PA77 **Ahmadkhani, S.:** *The Linear Response Pair Coupled Cluster Doubles Theory*
- PA78 **Aidas, K.:** *Structural and NMR Properties of Ionic Liquid Systems Modelled by an Integrated MD-QM/MM Approach*
- PA79 **Alessio, M.:** *Quantum Chemical Study of Nickelocene: From Magnetic Molecules to Materials*
- PA80 **Alharzali, N.:** *Theoretical study of OH-initiated decomposition of chlorpyrifos in the gaseous and aqueous phases*
- PA81 **Andrae, D.:** *Properties of Isolated Small Molecules, Molecular Ions and Molecular Clusters – Theory vs. Experiment*
- PA82 **Angappan, M. P.:** *Atmospheric degradation of the oxidation products of monoterpenes emitted by plants*
- PA83 **Aniban, X.:** *A New Perspective on Dispersion Interaction Density: o-DID*
- PA84 **Antalik, A.:** *Unleashing MiMiC: Making the scalable and flexible QM/MM framework truly versatile*
- PA85 **Asher, J.:** *Photoisomerisation and Relaxation of Variously-Substituted Quinazolinone-based Schiff Bases*
- PA86 **Bader, F.:** *Taylor expansion-based polyspherical kinetic energy operators in vibrationally correlated calculations*
- PA87 **Bajaj, A.:** *Metal-Ligand Covalency Trends in Actinide Complexes*
- PA88 **Bende, A.:** *Intermolecular-type conical intersections in benzene and catechol dimers*
- PA89 **Bensberg, M.:** *Corresponding Active Orbital Spaces along Chemical Reaction Paths*
- PA90 **Beran, G.:** *Designing Organic Photomechanical Engines with Exceptional Work Capacities Through Quantum Chemistry*
- PA91 **Berraud-Pache, R.:** *Modelling the interaction of a natural red dye with wool during the dyeing process*
- PA92 **Biczysko, M.:** *The Q/R Project: Quantum-Based Refinement of Biomacromolecules*

- PA93 **Avila-Blanco, G.:** *The 12D vibrational states of  $\text{CH}_4\text{Ar}$  and  $\text{CH}_4\text{F}^-$  computed with a 9D contracted intramolecular basis set*
- PA94 **Bleken, F. L.:** *Understanding  $\text{Si}(\text{CH}_3)_2\text{Cl}_2$  formation on a Cu rich model surface in the Rochow-Müller process*
- PA95 **Boese, A. D.:** *QM:QM Methods for Molecular Crystals*
- PA96 **Bokarev, S.:** *Electron dynamics and (auto)ionization in highly-excited molecules*
- PA97 **Boto, R. A.:** *Addressing the effect of the chemical structure on the coherence times of electron spin qubits in graphene nanofragments*
- PA98 **Bourne-Worster, S.:** *Quantum Dynamics of Excited State Proton Transfer in Green Fluorescent Protein*
- PA99 **Branzanic, A.:** *Why does sulfite reductase employ siroheme?*
- PA100 **Breza, M.:** *DFT studies of the cytotoxicity of the anticancer drug SN-38*
- PA101 **Brothers, E.:** *Underappreciated Errors in DFT Reaction Barriers*
- PA102 **Bucinsky, L.:** *Relativistic Quantum Crystallography of Hg atom and Hg compounds with X-ray Constrained Wavefunction fitting*
- PA103 **Budzák, Š.:** *Thermal isomerization of phenylazoindoles: Inversion or rotation?*
- PA104 **Cao, C.-S.:** *Ab initio Quantum Simulation of Strongly Correlated Materials with Quantum Embedding*
- PA105 **Cardenas, C.:** *Electron Localization (Function) in the Excited State with Single Determinant Methods*
- PA106 **Casanova, D.:** *Anti-Kasha Emission Triggered by J-Coupling and Molecular Rigidity*
- PA107 **Cernusak, I.:** *How do behave catenanes built from cyclo[18]carbon rings under tension?*
- PA108 **Chai, Z.:** *Grand canonical ensemble approaches for modeling electrochemistry in CP2K*
- PA109 **Chen, X.:** *Theoretical models of electron transfer and energy transfer in photocatalysis*
- PA110 **Chen, Z.:** *Electron transfer theory based on diabatic representation*
- PA111 **Cunha, A.:** *Structure and Dynamics of a VHL-recruiting PROTAC*
- PA112 **Delcey, M.:** *Variational optimization of multiconfigurational pair-density functional theory*
- PA113 **Jassar, M. B.:** *Benchmarking Semi-Empirical Methods for the Li-Ion battery Solid Electrolyte Interphase*

- PA114 **de Busturia, D. C.:** *Polarizable Embedding Potentials Through Molecular Fractionation with Conjugate Caps Including Hydrogen Bonds*
- PA115 **De Chavez, D.:** *Inner Projection-based Integral Evaluations using One-Centered Corrected Two-Electron Integrals*
- PA116 **de Haas, T.:** *Surface Hopping Dynamics of Excited-State Proton-Coupled Electron Transfer*
- PA117 **de Moura, C. E. V.:** *An Efficient Spin-Free Formulation of the Multireference Algebraic Diagrammatic Construction Theory for Core Excited States*
- PA118 **De Santis, M.:** *Environmental Effects via Multilevel Embedding Approaches in the Real-Time Time-Dependent Density Functional Theory*
- PA119 **de Souza, B.:** *On the importance of conformational Entropy when predicting Chemistry: results from the new Global Optimizer Algorithm (GOAT) implemented in ORCA*
- PA120 **Ding, L.:** *Information-Assisted Complete Active Space Optimization (i-CAS)*
- PA121 **Doslic, N.:** *Light Induced Processes in Uracil and Uracil Dimer Stacks in the Gas Phase and in Solution*
- PA122 **do Casal, M. T.:** *Anti-Kasha Photochemistry in Indigo Carmine*
- PA123 **East, A.:** *Predicting ligand-exchange free energies in solution: The chelate effect*
- PA124 **Eckhoff, M.:** *Lifelong Machine Learning Potentials*
- PA125 **Ehlert, C.:** *Metal-Free Molecular Catalysts for the Oxygen Reduction Reaction: Electron Affinity as an Activity Descriptor*
- PA126 **Eng, J.:** *Joint Experimental and Theoretical Investigation of Excited State Vibrational Coherences in Mn Single Molecule Magnets*
- PA127 **Erhard, J.:** *Kohn-Sham Inversion Using Techniques from the Optimized Effective Potential Method .*
- PA128 **Fantuzzi, F.:** *Electronic Structure, Bonding and Reactivity of Emerging Boron-Based Systems: Insights from Theory*
- PA129 **Ferenc, D.:** *Pre-Born–Oppenheimer Dirac–Coulomb–Breit computations for two-fermion systems*
- PA130 **Filip, M.-A.:** *Developing Hybrid Quantum Monte Carlo Algorithms for Low Quantum Overheads and Improved Noise Resilience*
- PA131 **Floris, F. M.:** *On the solvatochromic effect due to Pauli repulsion and dispersion solute–solvent interaction*
- PA132 **Foerster, A.:** *Large scale GW-BSE calculations with explicit treatment of spin-orbit effects*
- PA133 **Djumayska, S.:** *TD-DFT modeling of TADF blue light emitters*

## List of posters of the poster session B

(first 73 posters are part of the poster competition presented by PhD students)

- PB1 **Hunter, G.:** *Monte Carlo Simulations of Copper using Machine Learning Potentials*
- PB2 **Hurajt, A.:** *Advancing  $\beta$ -NMR Spectroscopy: Computational Modeling of NMR Shielding of Ions in Ionic Liquids*
- PB3 **Højlund, M.:** *Adaptive basis sets for time-dependent bivariational wave functions: Linear, polar and exponential parametrization of single-particle functions*
- PB4 **Høyer, N. M.:** *Quantum molecular dynamics with a time-dependent adaptive density-guided approach for potential energy surface construction*
- PB5 **Illobre, P. G.:** *Fully Atomistic Model to Compute Fluorescence Enhancements Near Plasmonic Materials*
- PB6 **Jahani, S.:** *New insight into polyanilines' electronic structures and properties augmented with orbital correlations*
- PB7 **Jaroš, A.:** *Actinide-actinide bonding in fullerenes: A DFT nightmare*
- PB8 **Javaheri Moghadam, M.:** *Measuring local correlations in biomolecular systems using quantum information theory*
- PB9 **Jayadev, N. K.:** *The regular and resonant Auger spectrum of benzene*
- PB10 **Jaykhedkar, N.:** *Assessing the effects of dispersion corrections on the temperature dependent structural properties of SrZrS<sub>3</sub> phases*
- PB11 **Jensen, A. B.:** *Efficient time-dependent vibrational coupled cluster computations with time dependent basis sets at the two-mode coupling level*
- PB12 **Jensen, R. B.:** *Runtime for Vibrational Structure on Quantum Computers*
- PB13 **Jiang, T.:** *Matrix Product State Algorithms for Response Function of Quantum Many-body Systems*
- PB14 **Jiménez, J. A. R.:** *Dynamic correlation into CASSCF wave functions by means of an effective potential.*
- PB15 **Jingar, R.:** *Efficient and accurate relativistic ab initio calculations of electric and magnetic dipole transitions in Eu<sup>3+</sup> complexes*
- PB16 **Joshi, P.:** *Generalized perturbative orbital relaxation correction based on random phase approximation*
- PB17 **Jíra, T.:** *Representative Sampling of Time-Resolved Electronic Spectra for Stilbene*
- PB18 **Jørgensen, F. K.:** *Singlet linear response for open-shell transition metals – extending the multiconfigurational short-range density functional theory*



- PB19 **Kaczun, T.:** *Enabling OF-DFT with Machine Learning? A novel ansatz for data generation*
- PB20 **Kalvoda, T.:** *Exploring the conformational space of short peptides: A way to understand protein folding?*
- PB21 **Khanifaev, J.:** *The effect of machine learning predicted anharmonic properties in Quantum Cluster Equilibrium calculations*
- PB22 **Kircher, J.:** *Benchmarking under uncertainty - Towards the prediction of polar organic reactivity*
- PB23 **Kitzmilller, N.:** *Extending the Concordant Mode Approach (CMA)*
- PB24 **Kjeldal, F.:** *Decomposing Chemical Space: Applications for Machine Learning*
- PB25 **Kneiding, H.:** *Evolutionary Multiobjective Optimization for Transition Metal Complexes*
- PB26 **Knysh, I.:** *BSE formalism vs TD-DFT: Dipole moments of increasingly long push-pull oligomers*
- PB27 **Kohn, J.:** *Efficient Calculation of Coupling Integrals with the Dimer Projection Method (DIPRO) using density-matrix (P) tight-binding (TB)*
- PB28 **Komando, L.:** *Redox potentials of iron III oxides in presence of ionic liquids and citrate anions. Quantum-chemical studies.*
- PB29 **Kováčová, A.:** *Quantum chemical evaluation of electrochemical oxidation potentials of phenol derivatives: Chemical accuracy of implicit SMD solvent model*
- PB30 **Kumar, P.:** *Modeling phosphorescent properties of Heteroleptic Ir (III) complexes with Local coupled-cluster method and DFT*
- PB31 **Kumar, R.:** *A Computational Framework for Designing Molecular Electronic Breadboards*
- PB32 **Kumar, V.:** *On the convergence behaviour of different Optimised Effective Potential methods*
- PB33 **Kvedaraviciute, S.:** *Enabling fully polarizable multiscale QM/MM simulations through MiMiC*
- PB34 **Lafiosca, P.:** *Fully polarizable Molecular Mechanics/Frozen Density Embedding approach for magnetic properties*
- PB35 **Le, V.:** *PyOpenRSP: Analytic Molecular Response Properties for Spectroscopy*
- PB36 **Leadbeater, C.:** *Non-unitary Trotter circuits for imaginary time evolution*
- PB37 **Lee, N.:** *Strongly correlated states have a simple structure*
- PB38 **Leitner, J.:** *The fourth-order algebraic diagrammatic construction scheme for the polarization propagator*

- PB39 **Lemke, Y.:** *Ascending Jacob's Ladder of Beyond-RPA Methods with Highly Accurate  $\sigma$ - and  $\tau$ -Functionals with Approximate Exchange Kernels*
- PB40 **Lemken, F.:** *Combined Hückel and Perturbation Theory Approach for the Prediction of  $\pi$  Contributions to Indirect Spin-Spin Coupling in Conjugated Hydrocarbons*
- PB41 **Liebert, J.:** *N-representability problem for excited states*
- PB42 **Ligorio, R. F.:** *GruPol: estimating electrostatic and electro-optic properties of macromolecules*
- PB43 **Lindic, T.:** *Fluorination of Small Carbon Based Molecules on a NiF<sub>2</sub> Model Surface: a First-Principles and AIMD Approach*
- PB44 **Lodeiro, L. N.:** *Mechanistic Insights into the DABCO-catalyzed Cloke-Wilson Rearrangement: A DFT Perspective*
- PB45 **Loja, A. D. M.:** *Computational study on the photochemical stability of hydrogen bonds within acid dimers*
- PB46 **Losada, I. B.:** *Intramolecular photoactivity and bimolecular electron transfer processes involving transition metal complexes revealed by DFT calculations*
- PB47 **Loukili, M.:** *The effect of pressure on the [2+2] cycloadditions of ethylene*
- PB48 **Luts, H.-E.:** *Halogen and chalcogen polyhydrides*
- PB49 **Lévárdi, Á.:** *Automated modeling of reaction networks of bullvalene*
- PB50 **Maisuradze, T.:** *From Rare to Earth-Abundant Transition Metal Photoactive Complexes: Long-lived Excited States of CoCCs*
- PB51 **Martinka, J.:** *Photodissociation of vinylbromide: a non-adiabatic molecular dynamics and machine learning study*
- PB52 **Mattos, R. S.:** *Quantum dynamics from Classical Trajectories*
- PB53 **Matz, F.:** *Molecular Auger Decay Rates from Complex-Variable Electronic-Structure Methods*
- PB54 **Mena, Y. A. C.:** *Electronic molecular parameters for new-physics searches in the BaCH<sub>3</sub> and YbCH<sub>3</sub> symmetric top molecules*
- PB55 **Merritt, I.:** *Nonadiabatic Coupling in Trajectory Surface Hopping: How Approximations Impact Excited-State Reaction Dynamics*
- PB56 **Meyr, J.:** *Unraveling the Mechanism of Covalent Lysine Attachment to Wortmannin: Insights from QM/MM studies*
- PB57 **Miron, G. D.:** *CO lock mechanism can explain the presence of Fluorescence in Non Aromatic Systems*
- PB58 **Moerman, E.:** *Reaching the thermodynamic limit of band gaps in the equation-of-motion coupled-cluster framework*

- PB59 **Monzel, L.:** *The path from rotations to vibrations. The quantum rotor in a magnetic field.*
- PB60 **Morgan, D.:** *Scalable and efficient ab initio X-ray spectroscopy calculations with numeric atomic orbitals*
- PB61 **Motoki, K.:** *Beyond Born-Oppenheimer pharmaceutical quantum chemistry of thalidomide analogs and deuterium substituents*
- PB62 **Mráziková, K.:** *QM investigation of phosphine synthesis in Venus' atmosphere*
- PB63 **Mueller, M.:** *An efficient and non-iterative method for large-scale screening applications combining DFT and semiempirical quantum mechanics*
- PB64 **Mörchen, M.:** *Autonomous Active Space Calculations through AutoCAS*
- PB65 **Müllerová, S.:** *Interaction of iron and chromium decorated circumcoronenes with hydrogen molecules – dissociation and side on/end on binding modes*
- PB66 **Nadoveza, N.:** *Analytical Canonic Polyadic representation of the potential energy surface for reactive scattering of CH<sub>4</sub> on Ni(111) (13D)*
- PB67 **Narayanan S J, J.:** *Shape Resonances of Uracil: The Effect of Microhydration*
- PB68 **Nemirovich, T.:** *Bridging Electrochemistry and Photoelectron Spectroscopy in the Context of Birch Reduction*
- PB69 **Netz, J.:** *Electronic structure of a radical bridged dinuclear cobalt(II) single-molecule magnet*
- PB70 **Nguyen, V. H. A.:** *High-throughput exploration of the chemical space for single molecule magnets discovery*
- PB71 **Nowak, D.:** *The application of machine learning methods to the prediction of novel ligands for ROR $\gamma$ /ROR $\gamma$ T receptors*
- PB72 **Oliveira, L.:** *Photochemistry and Proton Transfer Mechanisms in 2,6-Diamino-8-Azapurine*
- PB73 **Polena, J.:** *Electron-induced chemistry: The case of azobenzene*
- PB74 **Hall, M.:** *Noncovalent Control in Transition Metal Reactions*
- PB75 **Jordan, K.:** *Strategies for Accurate Calculation of Positron Binding Energies of Positron-Atom and Positron-Molecule Complexes*
- PB76 **Li, S.:** *Advances in Electronic Structure Methods*
- PB77 **Liu, W.:** *The SDS Family of Methods for Strongly Correlated Electrons*
- PB78 **Michl, J.:** *Metalloporphenes, Antiaromatic Analogs of Graphene*
- PB79 **Nakatsuji, H.:** *Quantum chemistry with accurate solutions of the Schrödinger equation*

- PB80 **Fu, M.:** *How one-photon properties affect the entangled two-photon absorption*
- PB81 **Gall, M.:** *Improved docking score predictions with a fragment-oriented multi-scale graph attention model*
- PB82 **Ganguly, G.:** *UV-vis Spectra Simulation of Transition Metal Porphyrins using ab initio Multireference Wavefunction Methods*
- PB83 **Gil, E. S.:** *Investigating the trans-azobenzene photodynamics with coupled-trajectories*
- PB84 **Goletto, L.:** *Multilevel-based Coupled Cluster in Density Functional Theory*
- PB85 **Gowland, D.:** *Ion-trap quantum computations of  $CF_4^+$  fragmentation using In-Quanto*
- PB86 **Grabarz, A.:** *The Computational Insight into Fused Heterocycle-Based Triarylhydrazone Photoswitching Mechanism*
- PB87 **Graf, D.:** *A Simple and Efficient Route towards Improved Energetics within the Framework of Density-Corrected Density Functional Theory*
- PB88 **Granatier, J.:** *The extrapolation Atomic Natural Orbitals of basis set to complete basis set (CBS) limit*
- PB89 **Guo, Y.:** *Multiconfigurational self-consistent field theory for large active space and spin-orbit coupling*
- PB90 **Guo, Z.:** *Efficient quantum imaginary time evolution by drifting real time evolution: an approach with low gate and measurement complexity*
- PB91 **Hapka, M.:** *Multiconfigurational symmetry-adapted perturbation theory combined with reduced density matrix functional theory*
- PB92 **Harsha, G.:** *Effect of quasi-particle and full self-consistency on the GW method*
- PB93 **He, J.:** *Ab initio study of laser driven ultrafast spin dynamics at 2D limit*
- PB94 **Hofierka, J.:** *Many-body theory of positron interactions with polyatomic molecules*
- PB95 **Hori, Y.:** *Characterization of the electronic and geometrical structures and the formation pathway in oxidized [NiFe]-hydrogenase*
- PB96 **Huang, Z.:** *Orbital Expansion Variational Quantum Eigensolver: Efficient Simulation of Molecules with Shallow Quantum Circuit*
- PB97 **Ivanova, A.:** *Influence of the long-range exchange in density functionals for the description of excited states of organic TADF blue emitters*
- PB98 **Jankowska, J.:** *Two-photon nonadiabatic molecular dynamics: the second excitation impact on the cyclohexadiene photo-cycloreversion mechanism*
- PB99 **Jelemenska, I.:** *Cobalt complexes of tetra dentate semicarbazones - A-DFT study*

- PB100 **Jeszczski, P.:** *Variational Dirac–Coulomb approach with explicitly correlated basis functions*
- PB101 **Johnson, P.:** *Strong Electronic Correlation with Richardson-Gaudin States*
- PB102 **Kadek, M.:** *Classical and quantum embedding theories for quantum chemistry on quantum computers: towards applications in life sciences*
- PB103 **Kelterer, A.-M.:** *Photodissociation versus Brook Rearrangement in Acylsilanes*
- PB104 **Khire, S.:** *Facilitating economic MP2-level gradient evaluation for large molecular clusters: An art of possible*
- PB105 **Kiriakidi, S.:** *Three cycles in the  $[MoO_2]^{2+}$ -catalyzed reduction of nitroaromatics to anilines with pinacol. A computational study towards the valorization of biomass subproducts.*
- PB106 **Kitsaras, M. P.:** *Atoms and Molecules in the atmospheres of magnetic White Dwarfs*
- PB107 **Komorovsky, S.:** *Modern DFT methods for prediction of the EPR g-tensor and hyperfine coupling tensor of species containing heavy elements*
- PB108 **Konecny, L.:** *Relativistic Quantum-Electrodynamical Density Functional Theory for Cavity Engineering of Excited States*
- PB109 **Larsson, E.:** *A new quantum-based embedding model for one- and two-photon absorption*
- PB110 **Liu, L.:** *Investigations of imine-based unidirectional light-driven molecular motors by using ab initio multiple spawning dynamics*
- PB111 **Li Manni, G.:** *Quantum Anamorphosis: Unraveling Magnetic Interactions in Polynuclear Transition Metal Clusters*
- PB112 **Lukeš, V.:** *Effect of Fluorination on Chemical and Electronic Structure of Selected Aromatic Molecules: DFT Study*
- PB113 **Malcek, M.:** *Impact of heteroatom doping on the hydrogen binding performance of circumcoronenes*
- PB114 **Malis, M.:** *Nonadiabatic processes in condensed phase systems with  $\Delta SCF$*
- PB115 **Malkin, O.:** *Distinguishing “Through-Space” from “Through-Bonds” Contribution in Indirect Nuclear Spin-Spin Coupling*
- PB116 **Malkin, V.:** *Transmission of spin-polarization by  $\pi$ -orbitals*
- PB117 **Manna, D.:** *The Impact of the Solvent Dielectric Constant on Dative Bonded Systems*
- PB118 **Margócsy, Á.:** *Towards a fully relativistic calculation of the Bethe logarithm for two-fermion systems*

- PB119 **Mariano, A. L.:** *Numerical Calculation of Vibronic Coupling and Spin Relaxation in Open-Shell Coordination Compounds with Multi-Reference Wave-function Methods*
- PB120 **Matito, E.:** *How Reliable Are Modern Density Functional Approximations to Simulate Vibrational Spectroscopies?*
- PB121 **Matúška, J.:** *Influence of the molecular representation on prediction of docking scores and screening properties of the neural network*
- PB122 **Medved, M.:** *Photoluminescence Centers in Carbon Nanodots Talk to Each Other*
- PB123 **Michalík, M.:** *O–C bond dissociation enthalpies of methoxy group in substituted anisoles*
- PB124 **Mihálka, Ě. Z.:** *Convergence improvement in the coupled-cluster framework — an alternative approach based on amplitude functions*
- PB125 **Mondal, S.:** *Spin-phonon decoherence in solid state paramagnetic defects from first principles*
- PB126 **Mori, H.:** *Machine Learning-Boosted Quantum Chemical Design of Ionic Liquids for CO<sub>2</sub> Absorption and Experimental Verification*
- PB127 **Nagy, P.:** *Accurate and efficient CCSD(T)/CBS up to 1000 atoms: optimization of the local natural orbital approach and large-scale applications*
- PB128 **Nandi, A.:**  *$\Delta$ -Machine Learning Approach to Improve a DFT-Based PES to CCSD(T) Accuracy*
- PB129 **Nava, P.:** *Ab-initio accurate singlet-triplet energy differences of cobalt complexes*
- PB130 **Orimo, Y.:** *First-principles simulations of multielectron dynamics under strong laser pulses on quantum computers*
- PB131 **Parasuk, V.:** *Mechanism of CO<sub>2</sub> Conversion Catalyzed by Nickel-Complex Electrocatalysts*
- PB132 **Parasuk, W.:** *Mechanism of Catalyzed CO<sub>2</sub> to Methanol Conversion by Ru-PNP Complex Assisted by Ethylenediamine*
- PB133 **Walewski, M.:** *Quantum resonant effects in cold Rb–Sr<sup>+</sup> collisions high above the ultracold regime*

## List of posters of the poster session C

(first 73 posters are part of the poster competition presented by PhD students)

- PC1 **Bachmair, B.:** *Rare event sampling for electronically excited states: A computational study of rare photodissociation channels in gas phase ammonia*
- PC2 **Bashir, S.:** *A DFT-D3 study of interactions of saponite and hectorite clay minerals with poly(2-methyl-2-oxazoline) (PMeOX) polymer*
- PC3 **De Vriendt, X.:** *Capturing correlation in the spin frustrated  $H_3$ -ring using the generator coordinate method and spin-constrained generalized Hartree-Fock states*
- PC4 **Habrovsky, R.:** *A new expansion of the Coulomb potential and linear  $r_{ij}$  terms*
- PC5 **Janoš, J.:** *On the wavelength-dependent photochemistry of the atmospheric molecule  $CF_3COCl$ : Ground-state versus excited-state dynamics*
- PC6 **Oswald, J.:** *Towards analytic coupled-cluster gradients for molecules in strong magnetic fields*
- PC7 **Otukile, K.:** *A Comprehensive Theoretical Investigation of Selected Low-Temperature Hydrocarbon Combustion Reactions*
- PC8 **Ozaydin, B.:** *On the impact of thermal fluctuations on the exciton structure of the PC612 and PC645 antenna complexes: A dual classical/quantum molecular dynamics simulations study*
- PC9 **Palao, D. G.:** *Environment effects change FRET distributions in a fluorophore-tagged disordered protein*
- PC10 **Panchagnula, K.:** *Exploring the parameter space of an endohedral atom in a cylindrical cavity*
- PC11 **Papapostolou, A.:** *responsefun: A Python Package for Computing Arbitrary Response Properties in the Algebraic Diagrammatic Construction Framework*
- PC12 **Patra, C.:** *Dimensionality Reduction in Electronic Structure Theory via Nonlinear Dynamics, Synergetics and Machine Learning: Classical and Quantum Computing Aspects*
- PC13 **Paul, R.:** *In Silico Studies of Spin crossover systems on surfaces*
- PC14 **Petry, S.:** *Modeling of blue light pathways in light harvesting complexes*
- PC15 **Pinel, S. S.:** *Electronic Resonances in  $N_2^-$*
- PC16 **Piras, A.:** *Predicting adsorbent and electronic properties of nanographenes*
- PC17 **Pérez, A. F.:** *Computation of Auger decay widths with complex-variable coupled-cluster theory: benzene and zinc as case studies.*

- PC18 **Pöverlein, M.:** *QM/MM Free Energy Calculations of Long-Range Biological Protonation Dynamics*
- PC19 **Rožić, T.:** *Insights into non-statistical chemical reactivity from a vibrational relaxation model*
- PC20 **Römer, A.:** *Theoretical studies of metal-metal cooperativity in pyrazolate-bridged complexes*
- PC21 **Safy, M.:** *MACHO Catalyst for CO<sub>2</sub> to Methanol Conversion: A Computational Study of the Catalytic Mechanisms and Kinetics*
- PC22 **Salamon-Krokosz, K.:** *Mechanistic studies of the fluorinated olefinic amino acid derivatives*
- PC23 **Sawicki, I.:** *Impact of regularized second-order correlation energy expression on the Double Hybrid Functionals performance*
- PC24 **Schnieder, B.:** *Quantum Chemical Study of the Combustion Reactions of Sulfur-Containing Char Systems using an Automatized Workflow*
- PC25 **Schreder, L.:** *CASSCF wavefunctions embedded in a massively parallel Gaussian and plane waves density functional environment*
- PC26 **Schürger, P.:** *Differential Shannon entropies characterizing electron-nuclear dynamics and correlation: Momentum-space versus coordinate-space wave packet motion*
- PC27 **Seidenath, S.:** *Spicy ONIOMs: A New Implementation of Multi-Scale and Fragment Methods*
- PC28 **Sen, A.:** *Identical Spin Multistate Reactivity Towards C-H Bond Activation in High-valent Mn/Fe-Oxo(Hydroxo) Species*
- PC29 **Sharma, M.:** *Efficient Simulation of High Harmonic Generation Using Gaussian Basis Functions*
- PC30 **Sharma, P.:** *Machine learning prediction of potential for surface hopping simulations, incorporating quantum vibrational effect*
- PC31 **Shi, B.:** *Gold-Standard Wave-Function Methods Applied to Surface Adsorption*
- PC32 **Singh, A.:** *Analyzing the limit for second-order correlation energy expression in the context of Adiabatic connection models*
- PC33 **Skladanová, K.:** *Adsorption of benzene on graphene studied by ML-accelerated ab-initio molecular dynamics simulations*
- PC34 **Srpak, I.:** *Path Integral Approaches to Spin-Phonon Coupled Systems*
- PC35 **Steiner, M.:** *Steering automated mechanism exploration in chemical reaction space*
- PC36 **Sukurma, Z.:** *Acceleration of the Auxiliary-Field Quantum Monte Carlo Procedure*



- PC37 **Sun, Q.:** *Heterofission mechanism for pure organic room temperature phosphorescence*
- PC38 **Szirmai, Á.:** *Top-down projection-based embedding for excited states of non-covalently interacting multi-chromophore systems*
- PC39 **Szántó, J. K.:** *Exploring correlations between structure and computed  $^{31}\text{P}$  NMR chemical shifts in p97 ATPase using a combined MD/DFT approach*
- PC40 **Talmazan, R. A.:** *PyConSolv: A Python Package for Conformer Generation of (Metal-Containing) Systems in Explicit Solvent*
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- PC44 **Tokić, N.:** *Vibrational tunneling spectra of the water hexamer prism*
- PC45 **Tonghuan, J.:** *General Analytical Nuclear Forces and Molecular Potential Energy Surface from Full Configuration Interaction Quantum Monte Carlo*
- PC46 **Urban, L.:** *Highly Efficient Approaches for Explicitly Correlated F12-Theory*
- PC47 **Vacek, J.:** *Theoretical study of  $\text{TiO}_2$  anatase surfaces via a CO IR probe*
- PC48 **Valencia, Y. Y. P.:** *Electronic Properties of 8-Selenoadenine in Water and DNA Environments: Insights from QM/MM Calculations*
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- PC56 **Wang, Q.:** *Red-emitting tetraphenylethylene derivative with aggregation-induced enhanced emission for luminescent solar concentrators: A combined experimental and density functional theory study*
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