

# Contents

## INVITED SPEAKERS

<b>Adiabatic channel models in reaction dynamics</b>	
<u>Jürgen Troe</u> . . . . .	S-1
<b>Using the Initial Value Representation of Semiclassical Theory to Add Quantum Effects to Classical Molecular Dynamics Simulations</b>	
<u>William H. Miller</u> . . . . .	S-2
<b>Low energy electron interaction with biomolecules: from gas to condensed phase- from room temperature to near absolute zero.</b>	
S. Denifl, P. Sulzer, I. Mähr, A. Mauracher, M. Beikircher, F. Zappa, A. Bacher, O. Echt, M. Probst, P. Scheier and <u>T. D. Märk</u>	S-3
<b>Single-conformation spectroscopy of synthetic foldamers</b>	
<u>Timothy S. Zwier</u> , William H. James III, Soo Hyuk Choi, and Samuel H. Gellman . . . . .	S-4
<b>Interfacial Structure and Dynamics in Molecular Solar Cells</b>	
<b>One Molecule at a Time</b>	
<u>Oliver L. A. Monti</u> . . . . .	S-5
<b>Ligand and Cluster size Effects in the Metal-mediated Activation of Methane: A cold Approach to a Hot Problem</b>	
<u>Helmut Schwarz</u> . . . . .	S-6
<b>Photonics in Medicine : two examples from bench to bedside</b>	
<u>Hubert van den Bergh</u> . . . . .	S-7
<b>Some Special Intra-molecular Dynamics in Protonated Ions</b>	
<u>Takeshi Oka</u> . . . . .	S-8
<b>Electronic Spectra of Carbon Chains and Rings: Astrophysical Relevance ?</b>	
<u>John P. Maier</u> . . . . .	S-9
<b>Ultrafast cluster dynamics in ultraintense laser fields</b>	
<u>Joshua Jortner</u> . . . . .	S-10
<b>Structure and Reactivity of Metal Oxides: Gas Phase Clusters Compared to Solid Catalysts</b>	
<u>Joachim Sauer</u> . . . . .	S-11

---

<b>Determination of Hydrocarbon Cation Structures in the Gas Phase</b>	
<u>P. v. R. Schleyer</u> , G. E. Douberly, A. M. Ricks, M. A. Duncan . . .	S-12
<b>Doped Helium Clusters: Random Walks in Imaginary and Real Time</b>	
<u>Marius Lewerenz</u> . . . . .	S-13
<b>Coherently controlled adiabatic passage between clusters of degenerate quantum states</b>	
<u>Ioannis Thanopoulos</u> . . . . .	S-14
<b>Ab initio vibration-rotation spectroscopy</b>	
<u>Walter Thiel</u> . . . . .	S-15
<b>Quantum chemistry and the violation of fundamental symmetries</b>	
<u>Robert Berger</u> . . . . .	S-16
<b>Slater-type geminals in molecular electronic-structure theory</b>	
<u>Wim Klopper</u> , Rafał A. Bachorz, Florian A. Bischoff, Andreas Glöß, Sebastian Höfener, David P. Tew . . . . .	S-17
<b>Molecular Quantum Dynamics and Molecular Kinetics: Challenges and Opportunities</b>	
<u>Roberto Marquardt</u> . . . . .	S-18
<b>Playing with transient chirality in the gas phase</b>	
Tina Scharge, Corinna Emmeluth, Marija Nedić, Anne Schütz, Christine Cézard, Philipp Zielke, Tobias N. Wassermann, Zhifeng Xue, Juhyon Lee, René W. Larsen, <u>Martin A. Suhm</u> . . . . .	S-19
<b>Vibrational Control of Dissociation and Isomerization in Gases and Liquids</b>	
<u>Fleming F. Crim</u> . . . . .	S-20
<b>Multiple-laser photofragment spectroscopy: From triatomics to helical peptides</b>	
<u>Thomas Rizzo</u> , Oleg Boyarkin, Jaime Stearns, Caroline Seaiby, Monia Guidi, Pavel Maksyutenko, and Maxime Grechko . . . . .	S-21
<b>Hydrogen Exchange Tunnelling: Large Curvature Reaction Path Dynamics</b>	
<u>David Luckhaus</u> . . . . .	S-22
<b>Generating benchmark interaction energies for weakly bound non-covalent clusters with the 2-body:many-body multicentered QM:QM method</b>	
<u>Gregory S. Tschumper</u> . . . . .	S-23
<b>All About Molecular Hydrogen</b>	
<u>Richard N. Zare</u> . . . . .	S-24

<b>Accurate structures of non-polar molecules by femtosecond rotational Raman coherence spectroscopy</b>	
Dominique Kumpli, Simon Lobsiger, Lukas Kuster, Hans-Martin Frey and <u>Samuel Leutwyler</u> . . . . .	S-25
<b>Lesions in DNA Subunits: Foundational Studies of Molecular Structures and Energetics</b>	
Henry F. Schaefer III . . . . .	S-26
<b>Combining the advantages of an iterative eigensolver and a contracted basis to compute energy levels of CH<sub>5</sub><sup>+</sup></b>	
Tucker Carrington . . . . .	S-27
<b>Photoelectron Studies of Protonation/Deprotonation in Aqueous Solutions</b>	
Manfred Faubel . . . . .	S-28
<b>Present status and future prospects of methane spectroscopy for planetary applications</b>	
Vincent Boudon . . . . .	S-29
<b>Infrared laboratory spectroscopy and satellite remote sensing measurements</b>	
Jean-Marie Flaud . . . . .	S-30
<b>Cavity ring down spectroscopy on explosives</b>	
Marcel Snels . . . . .	S-31
<b>Quantum chemical studies and vibrational spectroscopy of hydrogen-bonded molecules in the gas phase</b>	
Michael Hippler . . . . .	S-32

## EVENING LECTURE

<b>Fourier Transformation and Spectroscopy, a Symbiotic Pair</b>	
<u>Richard R. Ernst</u> . . . . .	E-1

## POSTER CONTRIBUTIONS

<b>High resolution rovibrational analysis of the CF-stretching mode and first overtone of CHFBrI: Steps toward detection of molecular parity violation</b>	
S. Albert, K. K. Albert, S. Bauerecker and M. Quack . . . . .	P-1
<b>The high resolution FTIR spectrum of C<sub>6</sub>H<sub>5</sub>F: Rovibrational analysis of the B<sub>1</sub> modes <math>\nu_4</math> and <math>\nu_{10b}</math></b>	
S. Albert, K. K. Albert and M. Quack . . . . .	P-2
<b>Rotationally resolved infrared spectroscopy of phenol (C<sub>6</sub>H<sub>5</sub>OH): Analysis of the modes <math>\nu_4</math> and <math>\nu_{17b}</math></b>	
<u>S. Albert</u> and M. Quack . . . . .	P-3

<b>The high resolution FTIR spectrum of aniline: Analysis of the bands <math>(\nu_{11} + I_0) \leftarrow I_0</math> and <math>(\nu_{11} + I_0) \leftarrow I_1</math></b>	
<u>S. Albert</u> and M. Quack . . . . .	P-4
<b>Electronic absorption spectrum of titanium dioxide</b>	
<u>Cristina Apetrei</u> , <u>Iryna Garkusha</u> , <u>Adam Nagy</u> , <u>Ramya Nagarajan</u> , <u>Zohra Guennoun</u> , <u>John Paul Maier</u> . . . . .	P-5
<b>On the determination of intramolecular potential functions: Application to hydrogen sulfide and methane</b>	
O. N. Ulenikov, <u>E. S. Bekhtereva</u> , O. V. Gromova, C. Leroy, S. Albert, S. Bauerecker, H. Hollenstein, and M. Quack . . . . .	P-6
<b>Exchange symmetry of the spin wave functions of two identical particles with not equal spins</b>	
<u>Sergey P. Belov</u> . . . . .	P-7
<b>Spin-forbidden transitions in the mixed <math>\text{H}^{79}\text{Br}:\text{H}^{81}\text{Br}</math> dimer</b>	
<u>Sergey P. Belov</u> . . . . .	P-8
<b>Experimental Observed Nuclear Spin Statistics in the Geared Bending Vibration of HI dimer</b>	
<u>Sergey P. Belov</u> , <u>Blake A. McElmurry</u> , <u>Fabrice F. Willaert</u> , <u>Laurant H. Coudert</u> , <u>Jon T. Hougen</u> , <u>Robert R. Lucchese</u> , <u>John W. Bevan</u> . . . . .	P-9
<b>Characterization of Non-Covalent Interactions Through Potential Morphing</b>	
<u>Blake A. McElmurry</u> , <u>Luis A. Rivera-Rivera</u> , <u>Fabrice F. Willaert</u> , <u>Zhongcheng Wang</u> , <u>Sergey P. Belov</u> , <u>Robert R. Lucchese</u> , <u>John W. Bevan</u> . . . . .	P-10
<b>iPEPICO Experiments @ SLS</b>	
<u>Andras Bödi</u> , <u>Melanie Johnson</u> , <u>Thomas Gerber</u> . . . . .	P-11
<b>Dynamical study of the <math>\text{O}(^1D) + \text{HD}</math> reaction on <math>^1\text{A}'</math> <math>\text{H}_2\text{O}</math> BR PES</b>	
<u>J. Brandão</u> , <u>Carolina M. A. Rio</u> . . . . .	P-12
<b>Electronic spectra of the <math>\text{MgC}_4\text{H}</math> and <math>\text{MgC}_6\text{H}</math> radicals</b>	
<u>Egor Chasovskikh</u> , <u>Evan B. Jochnowitz</u> , <u>John P. Maier</u> . . . . .	P-13
<b>Characterization of the hydrogen peroxide ground state potential energy surface, <math>\text{HOOH} (\text{X}, ^1\text{A}_1)</math></b>	
<u>Daniela V. Coelho</u> , <u>João Brandão</u> . . . . .	P-14
<b>Photodissociation dynamics of trimethyltin iodide</b>	
N. Ben Amor, D. Ambrosek, <u>C. Daniel</u> , R. Marquardt . . . . .	P-15
<b>Fold catastrophe in the presence of axial symmetry: classical and quantum aspects</b>	
<u>G. Dhont</u> , <u>B. I. Zhilinskií</u> . . . . .	P-16

---

<b>The millimeter-wave spectrum of SH<sub>2</sub>D<sup>+</sup>: Determination of the harmonic force field of the sulfonium ion</b>	
<u>Luca Dore</u> , Luca Bizzocchi, Claudio Degli Esposti . . . . .	P-17
<b>Experimental and theoretical study of Helium broadening and shift of HCO<sup>+</sup> rotational lines</b>	
Giovanni Buffa, <u>Luca Dore</u> , Francesca Tinti, Markus Meuwly . . . . .	P-18
<b>Near-Infrared High Resolution CRDS of Alkyl Peroxy Radicals: Internal Rotation and Spin-Rotation Couplings</b>	
<u>Patrick Dupré</u> . . . . .	P-19
<b>Molecular alignment and power saturation effects in nitrous oxide using a chirped 8 micron quantum cascade laser</b>	
<u>Geoffrey Duxbury</u> , Nigel Langford, Kenneth G. Hay and Nicola Tasinato . . . . .	P-20
<b>Quantum Simulation of Doped Helium Clusters</b>	
<u>M. Elhiyani</u> , M. Lewerenz . . . . .	P-21
<b>Quantum cascade laser spectroscopy for the continuous measurement of CO<sub>2</sub> isotopologues at ambient concentrations</b>	
Bela Tuzson, Joachim Mohn, Matthias J. Zeeman, Adrian Kammer, <u>Lukas Emmenegger</u> . . . . .	P-22
<b>Single molecule manipulation and chemistry at surfaces via inelastic electron tunneling</b>	
Manfred Parschau, Daniele Passerone, Karl-Heinz Rieder, Hans Josef Hug, <u>Karl-Heinz Ernst</u> . . . . .	P-23
<b>Alkali atoms on helium nanodroplets: aggregation, state selection, and electron spin resonance</b>	
Gerald Auböck, Johann Nagl, Markus Koch, Carlo Callegari, and <u>Wolfgang E. Ernst</u> . . . . .	P-24
<b>PFI-ZEKE spectroscopy of the Allyl Radical - Determination of the Ionization Potential</b>	
<u>Michael Gasser</u> , Andreas Bach, Peter Chen . . . . .	P-25
<b>Electronical structure and properties of Polyoxometalates</b>	
<u>Ali Gharib</u> , Mina Roshani, Manochehr Jahangir . . . . .	P-26
<b>Core Electron Spectroscopy of Oligopeptides in Aqueous Solution</b>	
<u>Samuele Giani</u> , Marcella Iannuzzi, Jürg Hutter . . . . .	P-27
<b>New laser-electron nuclear effects in the nuclear transition spectra in molecular systems</b>	
<u>A. V. Glushkov</u> . . . . .	P-28

---

<b>New Multi-photon excitation and dissociation for molecules: Energy transfer and effect of the rotational and V-T relaxation</b>	
<u>A. V. Glushkov</u> . . . . .	P-29
<b>Jahn-Teller effect and spin-orbit interaction in the X <sup>2</sup>E ground state of CH<sub>3</sub>Cl<sup>+</sup> studied by high-resolution pho- toelectron spectroscopy</b>	
<u>M. Grütter</u> , <u>M. Suter</u> , <u>F. Merkt</u> . . . . .	P-30
<b>A time-resolved study of the IR-driven cis-trans isomeriza- tion of HONO</b>	
<u>Virgiliu Botan</u> , <u>Peter Hamm</u> . . . . .	P-31
<b>Rovibronic energy topography and symmetry duality II: Molecular internal-momentum effects and multi-RES resonance in high symmetry molecules</b>	
<u>William G. Harter</u> , <u>Justin C. Mitchell</u> . . . . .	P-32
<b>A three-dimensional electrostatic trap for Rydberg atoms and molecules</b>	
<u>S. D. Hogan</u> and <u>F. Merkt</u> . . . . .	P-33
<b>Rovibrational spectroscopy of CHClF<sub>2</sub>: Polyad analysis of complex rovibrational spectra</b>	
<u>Hans Hollenstein</u> , <u>Sieghard Albert</u> , <u>Martin Willeke</u> , <u>Martin Quack</u> . . . . .	P-34
<b>FTIR and Jet-diode Laser Spectroscopic Study of PFCl<sub>2</sub>: Rovibrational Analysis of the PF-stretching mode <math>\nu_1</math></b>	
<u>Veronika Horká</u> , <u>Sieghard Albert</u> , <u>Manfred Caviezel</u> , <u>Martin Quack</u> , <u>Georg Seyfang</u> , and <u>Achim Sieben</u> . . . . .	P-35
<b>Progress on Computation of Molecular Parity Violation Us- ing the Coupled-Cluster Linear Response Approach</b>	
<u>Ľuboš Horný</u> , <u>Martin Quack</u> and <u>Martin Willeke</u> . . . . .	P-36
<b>Excited-state decay and dissociation of the ethyl radical in- vestigated with <i>ab initio</i> surface-hopping direct dynam- ics</b>	
<u>Jonas M. Hostettler</u> , <u>Andreas Bach</u> , <u>Peter Chen</u> . . . . .	P-37
<b>Parity violation in open-shell molecules: a quasirelativistic approach</b>	
<u>Timur Isaev</u> , <u>Sophie Nahrwold</u> , <u>Robert Berger</u> . . . . .	P-38
<b>VUV Beamline @ SLS</b>	
<u>Melanie Johnson</u> , <u>Andras Bödi</u> , <u>Thomas Gerber</u> . . . . .	P-39
<b>Millimeter Wave Spectroscopy of Titanium Monoxide and Titanium Dioxide</b>	
<u>Patrik Kania</u> , <u>Thomas F. Giesen</u> , <u>Holger S. P. Müller</u> , <u>Stephan Schlemmer</u> , and <u>Sandra Brünken</u> . . . . .	P-40

---

<b>Reaction dynamics of the reaction <math>O(^1D) + N_2O \rightarrow NO + NO</math> under constrained impact geometry conditions. A Study by 3-D Velocity Mapping</b>	
<u>S. Kauczok</u> , N. Goedecke, A. I. Chichinin, K. -H. Gericke, C. Maul	P-41
<b>High Resolution Infrared Spectroscopy of Small Heterocyclic Chiral Biomolecular Precursor Molecules</b>	
<u>Karen Keppler Albert</u> , Sieghard Albert, Martin Quack, Jürgen Stohner	P-42
<b>Raman scattering of the light on metastable levels of diatomics with account for nuclear motion contribution</b>	
<u>O. Yu. Khetselius</u>	P-43
<b>Laser ionization (dissociation) of molecules in the isotopes separation and calculating hfs parameters in heavy-element chemistry and spectroscopy</b>	
<u>O. Yu. Khetselius</u> , A. V. Glushkov, A. V. Loboda, E. P. Gurnitskaya	P-44
<b>Potential energy functions of the six lowest electronic states of <math>ArKr^+</math></b>	
<u>Evgueni Kleimenov</u> , Lorena Piticco, Frédéric Merkt	P-45
<b>Resonant Femtosecond Two Color UV-FWM Spectroscopy of <math>H_2CO</math></b>	
<u>G. Knopp</u> , A. M. Walser, M. Meisinger, P. P. Radi, M. Tulej and T. Gerber	P-46
<b>Discontinuous hygroscopic growth of an aqueous surfactant/salt aerosol particle levitated in an electrodynamic balance</b>	
Vacharaporn Soonsin, <u>Ulrich K. Krieger</u> , Claudia Marcolli, Thomas Peter	P-47
<b>Stereoselective laser pulse control: Simulations for a surface mounted chiroptical molecular switch</b>	
<u>Dominik Kröner</u> , Bastian Klaumünzer, Tillmann Klamroth	P-48
<b>Intramolecular Redistribution of Vibrational Energy in Propargyl-halides Measured by Femtosecond Pump-Probe Experiments</b>	
V. Krylov, <u>A. Kushnarenko</u> , E. Miloglyadov, M. Quack, G. Seyfang	P-49
<b>Direct Femtosecond Observation of Tight and Loose Ion Pairs upon Photoinduced Bimolecular Electron Transfer</b>	
<u>Bernhard Lang</u> , Omar F. Mohammed, Katrin Adamczyk, Natalie Banerji, Jens Dreyer, Erik T. J. Nibbering and Eric Vauthey	P-50

<b>Difference-frequency generation of widely tunable Fourier-transform-limited terahertz pulses using the organic crystal DAST</b>	
<u>Jinjun Liu</u> , Hansjürg Schmutz, and Frédéric Merkt . . . . .	P-51
<b>On the significance of the radical-complex mechanism in combination reactions: New insight into an old theme</b>	
<u>Klaus Luther</u> . . . . .	P-52
<b>Time-Resolved Raman Spectroscopy of IVR in Terminal Acetylene Molecules</b>	
<u>A. L. Malinovsky</u> and E. A. Ryabov . . . . .	P-53
<b>Accuracy in high resolution and high sensitivity spectroscopy: predissociation lifetime in (HF)<sub>2</sub> using CRDS</b>	
<u>Carine Manca</u> , Bernhard Büchler, Andreas Schneider, Martin Quack . . . . .	P-54
<b>Intramolecular vibrational energy flow: localized eigenstates and nonergodic dynamics</b>	
<u>Paranjothy Manikandan</u> , Srihari Keshavamurthy . . . . .	P-55
<b>Potential energy surfaces and dynamics of the van der Waals complexes of aromatic molecules with argon atoms</b>	
<u>Jan Makarewicz</u> . . . . .	P-56
<b>Accurate Potential Energy Functions of Xe<sub>2</sub><sup>+</sup> from High-Resolution Photoelectron Spectroscopy and a Distance-Dependent Spin–Orbit Coupling Model</b>	
O. Zehnder, <u>R. Mastalerz</u> , M. Reiher, F. Merkt, and R. A. Dressler . . . . .	P-57
<b>Submillimeter Spectroscopy and A Complete 3D Intermolecular Morphed Potential of ArHBr</b>	
<u>B. A. McElmurry</u> , F. F. Willaert, R. R. Lucchese, J. W. Bevan . . . . .	P-58
<b>Coriolis Coupling in the <sup>1</sup>A<sub>2</sub>(3p<sub>x</sub>) Rydberg State of Formaldehyde</b>	
<u>M. Meisinger</u> , A. Schulenburg, F. Merkt, P. Radi . . . . .	P-59
<b>Structure and Dynamics of Hydrogen Bonded Complexes with Ammonia: A Microwave Spectroscopy Study</b>	
<u>Sonia Melandri</u> , Barbara Michela Giuliano, Assimo Maris, Biagio Velino, Laura Favero, Walther Caminati . . . . .	P-60
<b>Highly excited bending rovibrational states of HNC</b>	
<u>Georg Ch. Mellau</u> . . . . .	P-61
<b>Rotational spectroscopy of hydrogen - carbon monoxide complexes</b>	
<u>Julie M. Michaud</u> , Paul L. Raston, Wolfgang Jäger . . . . .	P-62

---

<b>Isotope selective overtone spectroscopy (ISOS) of <math>^{12}\text{C}_6\text{HD}_5</math>, <math>^{13}\text{C}^{12}\text{C}_5\text{HD}_5</math> and <math>\text{C}_6\text{H}_5\text{NH}_2</math> measured in a molecular beam</b>	
<u>Eduard Miloglyadov</u> , Martin Quack and Georg Seyfang . . . . .	P-63
<b>Rovobronic energy topography and symmetry duality I: Tensor eigenvalue structure and tunneling effects in low-symmetry species-clustering in high symmetry molecules</b>	
<u>Justin C. Mitchell</u> , William G. Harter . . . . .	P-64
<b>Exploration of the <math>\text{NH}_3\text{-H}_2</math> van der Waals Interaction by High Level ab initio Calculations</b>	
<u>Mirjana Mladenović</u> , Marius Lewerenz, Geraldine Cilpa, Pavel Rosmus, Gilberte Chambaud . . . . .	P-65
<b>On the inversion of the ammonia molecule</b>	
<u>Mirjana Mladenović</u> . . . . .	P-66
<b>Polarization Dependence of NO Rydberg Spectra: an Experimental Investigation</b>	
<u>Sandro Mollet</u> , Christian Seiler, Frédéric Merkt . . . . .	P-67
<b>Cw-OPOs: Widely tunable and narrow-linewidth radiation for near- to mid-IR spectroscopy</b>	
<u>Frank Müller</u> . . . . .	P-68
<b>The <math>2200\text{--}4700\text{ cm}^{-1}</math> Strong Interaction Region of <math>^{13}\text{CH}_4</math></b>	
<u>Hans-Martin Niederer</u> , Sieghard Albert, Sigurd Bauerecker, Vincent Boudon, Jean-Paul Champion, Martin Quack . . . . .	P-69
<b>Rotationally resolved spectroscopy of the electronically excited C and D states of XeKr and XeAr</b>	
<u>Lorena Piticco</u> , Urs Hollenstein and Frédéric Merkt . . . . .	P-70
<b>Theoretical corroboration of the Main Features of the SER Spectra of Symmetrical Molecules Adsorbed on Noble Metal Substrates</b>	
<u>A. M. Polubotko</u> . . . . .	P-71
<b>Some Possible Reasons For Anomalies in the SER Spectra of Symmetrical Molecules Adsorbed on Silver and Some Other Metal Substrates</b>	
<u>A. M. Polubotko</u> . . . . .	P-72
<b>Rovibrational spectroscopy of the Fermi-interacting <math>\nu_4 = 1</math> and <math>\nu_3 = \nu_6 = 1</math> levels of <math>\text{DCF}_3</math></b>	
<u>Petr Pracna</u> , Adina Ceausu-Velcescu, Adriana Predoi-Cross, Brant Billingham . . . . .	P-73

<b>Quantum dynamics on a model potential allowing for pre-dissociation with and without coherent laser excitation</b> <u>Robert Prentner</u> , Martin Quack and Jürgen Stohner . . . . .	P-74
<b>Single and double-resonance spectroscopy by applying four-wave mixing techniques</b> <u>Peter P. Radi</u> , Marek Tulej, Margarete Meisinger, Peter Bornhauser, Dimitrii Kozlov . . . . .	P-75
<b>Vibrational anharmonicity on a metal surface</b> I. Respondek, Y. Scribano, D. M. Benoit . . . . .	P-76
<b>Electronic Absorption Spectra of Collisionally Cooled Ions Collected Using a 22-Pole Trap</b> <u>V. Rudnev</u> , C. Rice, J. P. Maier . . . . .	P-77
<b>Fine and hyperfine structure of high Rydberg states of xenon studied by millimetre wave spectroscopy and multichannel quantum defect theory</b> <u>Martin Schäfer</u> , Matthias Raunhardt, Frédéric Merkt . . . . .	P-78
<b>The Jahn-Teller effect in the allene cation</b> <u>Anna M. Schulenburg</u> , Frédéric Merkt . . . . .	P-79
<b>Preparing truly nonpenetrating Rydberg-Stark states of a molecule: The case of H<sub>2</sub></b> <u>Ch. Seiler</u> , S. D. Hogan, S. Mollet, F. Merkt . . . . .	P-80
<b>Semi-analytical recipes for calculating the vibrational-rotational levels of a diatomic molecule</b> <u>Matti Selg</u> . . . . .	P-81
<b>A new approach to spectral analysis of molecules adsorbed on surfaces</b> <u>E. A. Sobakinskaya</u> , A. V. Burenin, V. L. Vaks . . . . .	P-82
<b>Exploring Conformational Landscapes of Model Peptides and their Complexes by Matrix-Isolation Techniques</b> <u>György Tarczay</u> , Gábor Magyarfalvi, Sándor Góbi, Elemér Vass, Gábor Pohl, Tamás Beke, András Perczel . . . . .	P-83
<b>Transferable Scaling Factors for the Analysis of Gas-phase and Matrix-Isolation Vibrational Spectra</b> Csaba Fábri, Tamás Szidarovszky, Gábor Magyarfalvi, <u>György Tarczay</u> . . . . .	P-84
<b>First Principles Calculation of Electron Spin-Rotation Tensors</b> <u>György Tarczay</u> , Péter G. Szalay, Jürgen Gauss . . . . .	P-85
<b>Sub Doppler resolution laser spectroscopy of C<sub>2</sub>H<sub>2</sub> using double resonance methods</b> <u>Fatih Ünlü</u> , Andreas Schneider, Georg Seyfang, Martin Quack . . . . .	P-86

---

<b>On the global analysis of the CH<sub>3</sub>D ro-vibrational energies</b>	
<u>O. N. Ulenikov</u> , E. S. Bekhtereva, E. A. Sinitsin, S. Albert, S. Bauerecker, H. Hollenstein, and M. Quack . . . . .	P-87
<b>Supersonic molecular beam spectrometer in analytical ap- plications</b>	
<u>V. Vaks</u> , A. Maslovsky, E. Sobakinskaya, M. Chernyaeva . . . . .	P-88
<b>Detailed Microwave Studies of Fluoroformyloxyl and Fluo- rosulfate Radicals</b>	
<u>Juraj Varga</u> , Lucie Kolesniková, Marie Šimečková, Lucie Nová Štríteská, Patrik Kania and Štěpán Urban . . . . .	P-89
<b>Structure of the low-lying electronic states of Xe<sub>2</sub><sup>+</sup> from ro- tationally resolved photoelectron spectra</b>	
<u>K. Vasilatou</u> , U. Hollenstein, F. Merkt . . . . .	P-90
<b>Electronic structure and spectroscopy of CO</b>	
<u>Gabriel J. Vázquez</u> , José M. Amero, Hans–Peter Liebermann, Robert J. Buenker, Hélène Lefebvre–Brion . . . . .	P-91
<b>Trapping hydrogen after multistage Zeeman deceleration</b>	
<u>A. W. Wiederkehr</u> , S. D. Hogan, H. Schmutz, M. Andrist, B. Lambillotte, and F. Merkt . . . . .	P-92
<b>Novel applications of laser- and sympathetically cooled ions in ion traps</b>	
<u>Stefan Willitsch</u> , Martin T. Bell, Alexander D. Gingell, James M. Oldham and Timothy P. Softley . . . . .	P-93
<b>Non-invasive on-line diagnostics of parenchymatous organ’s viability at critical states by radiophysics methods</b>	
<u>V. Zagainov</u> , A. Kostrov, A. Strikovskiy, D. Yanin, S. Vasenin, I. Druzhkova, V. Vaks, E. Sobakinskaya, V. Markov . . . . .	P-94