

European Conference on Laboratory Astrophysics ECLA2016
"Gas on the Rocks"
 (November 21 - 25, 2016, CSIC, Madrid, Spain)

SCIENTIFIC PROGRAM

**Monday
November 21**

09:00 - 10:30	Registration
Put up posters (posters will be exhibited all days)	
10:30 - 11:00	LOC and SOC Opening welcome

SESSION - Comets, asteroids, meteorites and the primitive Solar System nebula: formation and evolution (Chair: Harold Linnartz)

11:00 - 11:35	D. Bockelée-Morvan	The composition of comets (R)
11:35 - 12:00	J.R. Brucato	Laboratory experiments relevant to Astrobiology (I)
12:00 - 12:25	C. Engrand	Isotopic composition and formation of primitive organic matter in the presolar nebula (I)
12:25 - 12:50	M. Fulle	Characterization of cometary dust (I)
12:50 - 13:08	O. Muñoz	Scattered light as a diagnostic tool for characterizing cosmic dust grains. The IAA-Cosmic Dust LABoratory
13:08 - 13:26	V. Taquet	A primordial origin for molecular oxygen in comets
13:26 - 15:00 Lunch		
15:00 - 15:18	N. Abou Mrad	Study of cometary organic composition through GC-MS analysis of laboratory ice analogs
15:18 - 15:36	J. Trigo-Rodríguez	Formation of biomolecules by aqueous alteration of carbonaceous chondrites in presence of formamide

SESSION - Protoplanetary disks and planet formation (Chair: Karine Demyk)

15:36 - 16:11	T. Henning	Dust in protoplanetary disks (R)
16:11 - 16:36	E. Chapillon	The ALMA view of protoplanetary disks (I)
16:36 - 17:00 Coffee break		
17:00 - 17:25	Y. Aikawa	Chemical modelling of protoplanetary disks (I)
17:25 - 17:50	A. Heays	Gas phase photodissociation and ionization database
17:50 - 18:08	A. Jiménez	Soft X-ray irradiation of silicate dust
18:08 - 18:26	M. Drozdovskaya	Dynamic assembly of ices in protoplanetary disk midplanes
18:26 - 19:30 Poster session (poster presenters at their poster)		

**Tuesday
November 22**

SESSION - The late stages of star evolution: dust formation

(Chair: Juan Ramón Pardo)

09:30 - 10:05	M. McCarthy	Laboratory rotational spectroscopy of radicals, anions and Si-bearing molecules (R)
10:05 - 10:30	M. Agúndez	Gas phase chemical models and observations of AGBs (I)
10:30 - 10:55	F. Salama	Formation of cosmic carbon dust analogues in plasma reactors (I)
10:55 - 11:20	J.A. Martín Gago	Mimicking cosmic dust: the STARDUST machine and surface science (I)
11:20 - 11:40	Coffee break	
11:40 - 11:58	S. Bromley	A bottom-up computational modelling approach to the formation and properties of silicate dust
11:58 - 12:16	M. van der Sande	Using forward chemistry to improve the understanding of the stellar winds of O-rich AGB stars
12:16 - 12:34	D. Gobrecht	Driving dusty mass loss in AGB stars

SESSION - Planet, Moon, and exoplanet surfaces and atmospheres

(Chair: Gianni Strazzulla)

12:34 - 13:09	S. Yurchenko	Molecular line lists for modeling atmospheres of exoplanets – R
13:09 - 13:34	E. Lellouch	The ALMA view of Planets and Moons (I)
13:34 - 14:45	Lunch	
14:45 - 15:10	I.-L. ten Kate	Mars surface simulations. The Curiosity's world (I)
15:10 - 15:35	D. Ascenzi	Laboratory experiments on chemical reactions in Titan's atmosphere (I)
15:35 - 15:53	J. Zabka	Anion chemistry on Titan: systematic studies of the growth and stability of large negative ions
15:53 - 16:11	A. Domaracka	Intra-cluster molecular growth in carbonaceous clusters induced by ion collisions
16:11 - 16:25	Coffee break	
16:25 - 16:43	R. Claudi	Atmosphere in a Test Tube: habitability in laboratory
16:43 - 17:01	G. Strazzulla	VUV spectroscopy of ices after 1 keV electron bombardment
17:01 - 19:00	Poster session with tapas (poster presenters at their poster)	

**Wednesday
November 23**

SESSION - The signatures of the evolving interstellar medium

(Chairs: Víctor J. Herrero (till coffee break) & Philippe Brechignac)

09:30 - 10:05	E. Dartois	Interstellar and interplanetary solids in the laboratory, from observations to laboratory simulations for dust models – (R)
10:05 - 10:30	C. Jaeger	Formation routes of cosmic dust (I)
10:30 - 10:55	O. Berné	PAHs and fullerenes: observations and top-down chemistry(I)
10:55 - 11:15	Coffee break	
11:15 - 11:40	S. Brünken	High-resolution spectroscopy of cold molecular ions (I)
11:40 - 11:58	A. Fauré	Recent advances in molecular excitation studies
11:58 - 12:16	S. Montero	Experimental study of state-to-state rates for elementary inelastic collision processes involving He, H ₂ and H ₂ O species
12:16 - 12:34	K. Demyk	Interstellar silicates dust analogs: MIR/FIR/submm spectroscopic properties at low T and comparison with astronomical dust models
12:34 - 12:52	G. Mulas	Theoretical PAH vibrational spectroscopy beyond the harmonic approximation
12:52 - 13:10	A. Omont	Interstellar fullerene compounds and diffuse interstellar bands
13:10 - 15:00	Lunch	
15:00 - 15:18	J. I. Martínez	By-aggregation growth and relative abundance of small SinCm (n + m < 5) clusters in the Interstellar Medium
15:18 - 15:36	V. Mennella	Gas on the carbonaceous rocks

SESSION - Dense Clouds: the gas-ice interface and molecular complexity

(Chair: Ewine van Dishoeck; THURSDAY: (Chairs: Liv Hornekaer & Jean-Hughes Fillion))

15:36 - 16:11	L. d'Hendecourt	Molecular complexity in interstellar ice analogues as a possible template for prebiotic chemistry (R)
16:11 - 16:36	W. Brown	Laboratory studies of organic molecules in ices (I)
16:36 - 17:01	G. Fedoseev	Solid-state formation of complex molecules under dense cloud conditions (I)
17:01 - 17:25	Coffee break	
17:25 - 17:50	J. Goicoechea	The ALMA view of molecular gas at the border of illuminated molecular clouds (I)
17:50 - 18:15	M. Bertin	UV photodesorption of small organic species (I)
18:15 - 19:15	Poster session with tapas (poster presenters at their poster)	

**Thursday
November 24**

09:00 - 09:25	R. Garrod	Modelling molecular formation and chemistry in interstellar ices (I)
09:25 - 09:50	F. Spiegelman	Modelling dynamical properties and reactivity of molecules on water clusters and ice (I)
09:50 - 10:08	A. Rimola	Surface-induced chemical evolution in space studied by quantum chemical calculations
10:08 - 10:26	N. Watanabe	Strong temperature dependence of ortho-to-para conversion of H ₂ on amorphous solid water at around 10 K
10:26 - 10:44	H. Chaabouni	Hydrogenation of CO-bearing molecules on interstellar grain surfaces
10:44 - 11:05	Coffee break	
11:05 - 11:23	J. Noble	Photochemistry of water: Pah complexes and ice mixtures. The role of molecular orientation in reactivity
11:23 - 11:41	F. LePetit	Model of grain surface chemistry in PDRs
11:41 - 11:59	S. Le Picard	Carbon atom reaction products: towards molecular complexity in astrophysical objects
11:59 - 12:17	D. Paardekooper	Laser desorption time-of-flight mass spectrometry of VUV photo-processed ices
12:17 - 12:35	R. Martin-Domenech	Photon-induced desorption processes in astrophysical ice analogs: two observed patterns in the description of photoproducts
12:35 - 12:53	A. Zanchet	Detailed theoretical study on the methanol + OH reaction
12:53 - 13:11	J. C. Guillemin	Does photochemistry play a key role in the formation of detectable species in molecular clouds?
13:11 - 14:30	Lunch	

SESSION - Chemical fingerprints of star formation

(Chair: José Cernicharo; FRIDAY: (Chairs: José L. Alonso & Stephan Schlemmer))

14:30 - 15:05	E. F. van Dishoeck	Chemical fingerprints of star formation (R)
15:05 - 15:30	P. Caselli	Astrochemistry in the earliest stages of star formation (I)
15:30 - 15:55	E. Jiménez	Gas phase reactivity of complex organic molecules at very low temperatures: CRESU Advances and Astrochemical Impact (I)
16:00 - 18:00	Poster session with coffee break (poster presenters at their poster)	
20:30	CONFERENCE DINNER at the Hotel Miguel Angel (talk by José L. Alonso)	

**Friday
November 25**

09:00 - 09:25	O. Roncero	Quantum chemistry of small molecules, reactivity, state to state reaction rates, and photodissociation (I)
09:25 - 09:50	W. Geppert	Using ion beams and traps to study anion reactions of astrophysical interest (I)
09:50 - 10:15	J.L. Doménech	Infrared spectroscopy of protonated ions (I)
10:15 - 10:33	C. M. Zwolf	VAMDC evolution towards bridging laboratory astrophysics and astrophysics
10:33 - 10:51	N. Marcelino	Chemical inventory of pre/proto-stellar cores: B1-b and TMC-1
10:51 - 11:10	Coffee break	
11:10 - 11:28	A. Coutens	Chemical modelling of complex organic molecules in star-forming regions
11:28 - 11:46	L. Kolesníková	Laboratory rotational spectroscopy studies of interstellar molecules
11:46 - 12:08	C. Pizzarini	Sulfur-bearing molecular species: rotational spectroscopy and quantum-chemical computations at the LMSB

SESSION - Supernovae and shocks: high-energy processing of matter

(Chair: Marcelino Agúndez)

12:08 - 12:43	M. Barlow	Observations of supernova dust with Herschel, ALMA and optical telescopes (R)
12:43 - 13:08	E. Constantini	Probing interstellar matter with X-rays (I)
13:08 - 13:30	C. Joblin	Concluding remarks

Take down posters

CONFERENCE CLOSING

Notes:

(R) = Review Talk (30 + 5 min)

(I) = Invited Talk (20 + 5 min)

No mark = Contributed Talk (15 + 3 min)

Posters: A0 standard format

LOC will provide assistance with presentations

Posters (sorted by session and presenting author in alphabetical order)

SESSION - Comets, asteroids, meteorites and the primitive Solar System nebula: formation and evolution

- **PT01-1** Basile Auge (CIMAP, France) - *Swift heavy ion induced modifications of nitrogen-rich ices relevant to surfaces of Oort Cloud objects*
- **PT02-1** Rosario Brunetto (Institut d'Astrophysique Spatiale, CNRS, France) - *Laboratory experiments simulating space weathering of dark surfaces*
- **PT03-1** Sergey Gorbunov (Lebedev Physical Institute of the RAS, Russian Federation) - *A model of wet chemical etching of heavy ions tracks in olivine from meteorites*
- **PT04-1** Qian Li (Department of Chemistry, University of Hong Kong, China) - *Formation of PAHs from acetylene over silicate and SiC particles*
- **PT05-1** Yves Marrocchi (CRPG-CNRS, France) - *Gas-melt and gas-solid interactions in the early solar system*
- **PT06-1** Marina Martínez-Jiménez (Institute of Space Sciences (CSIC-IEEC), Spain) - *Chondrite bulk compositions: Evidence for ring setting and incomplete mixing in protoplanetary disks*
- **PT07-1** Carles E. Moyano-Camero (Institut de Ciències de l'Espai (CSIC-IEEC), Spain) - *Reflectance spectra of carbonaceous chondrites to find clues on their parent asteroids: CH₃ chondrites and 21 Lutetia*
- **PT08-1** Sergei Nayakshin (Department of Physics and Astronomy, UK) - *Numerical simulations of planetesimal formation*
- **PT09-1** Valeriy Snytnikov (Boreskov Institute of Catalysis, Russian Federation) - *Experimental data for constraining the temperature of the circumsolar disc based on olivine components of carbonaceous chondrites*
- **PT10-1** Carlo Maria Zwolf (Observatoire de Paris, France) - *The Water-HCN dimer: First-principles calculation of a rigid-rotor potential energy surface and impact on scattering calculations*

SESSION - Protoplanetary disks and planet formation

- **PT01-2** Arthur Bosman (Leiden Observatory, Netherlands) - *Probing the planet forming regions of proto-planetary disks with infrared CO₂ emission*
- **PT02-2** Gustavo A. Cruz-Diaz (NASA Ames Research Center, USA) - *PAH-Mineral Interactions. A Laboratory Approach to Astrophysical Catalysis*
- **PT03-2** Aneurin Evans (Keele University, UK) - *Thermally induced crystallisation in carbonated Ca-Mg silicates*

- **PT04-2** Niels Ligterink (Leiden Observatory / Sackler Laboratory for Astrophysics, Netherlands) - *Controlling hydrogen lamp emission profiles to simulate interstellar VUV radiation fields*
- **PT05-2** Gwendolyn Meeus (Universidad Autónoma de Madrid, Spain) - *Herschel's view of the gas content of Herbig Ae/Be discs*
- **PT06-2** Hideko Nomura (Tokyo Institute of Technology, Japan) - *ALMA observations of CO gas depletion in the protoplanetary disk around TW Hya*
- **PT07-2** Olga Stoyanovskaya (Novosibirsk State University, BIC SB RAS, Russian Federation) - *Can protoplanetary embryo leave chemical fingerprints in parent circumstellar disc?*
- **PT08-2** Jonathan C. Tan (University of Florida, USA) - *Gas, Dust and Pebble Evolution in Protoplanetary Disks - The Supply Chain for Compact Planetary Systems*
- **PT09-2** Merel Van 't Hoff (Leiden Observatory, Netherlands) - *Robustness of N_2H^+ as tracer of the CO snowline*

SESSION - The late stages of star evolution: dust formation

- **PT01-3** Belén Alemán (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *RIGS: Radiofrequency Interstellar Gas System for Molecular Spectroscopy*
- **PT02-3** Rémi Bérard (IRAP, Univ. Toulouse 3 & CNRS, France) - *Investigating the impact of C/O on dust formation in cold plasma reactors*
- **PT03-3** José Pablo Fonfría (Instituto de Ciencia de Materiales de Madrid, CSIC, Spain) - *The depletion of the refractory molecules SiS, SiO, SiC₂, and C₂H₄ in the innermost envelope of the AGB star IRC+10216*
- **PT04-3** Pernille Jensen (Aarhus University, Denmark) - *Aliphatic Features in the 6-12 micron mid-IR PAH bands*
- **PT05-3** Christine Joblin (IRAP, Univ. Toulouse 3 & CNRS, France) – *Characterization of PAH content and distribution in Cosmic Dust analogues using the AROMA setup*
- **PT06-3** Koen Lauwaet (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *The STARDUST machine: dust analogue formation I*
- **PT07-3** Lidia Martínez (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *The STARDUST machine: dust analogue formation II*
- **PT08-3** Gonzalo Santoro (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *The STARDUST machine: Analysis modules*
- **PT09-3** Antoni Macià Escatllar (Universitat de Barcelona, Spain) - *Realistic modelling of nano-aggregated fluffy dust silicate particles using atomistic simulations*
- **PT10-3** Miguel Santander-García (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *ALMA observations of the young planetary nebula NGC 6302*
- **PT11-3** Luis Velilla-Prieto (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *Circumstellar chemistry of Si-C bearing molecules toward IRC+10216*

SESSION - Planet, Moon, and exoplanet surfaces and atmospheres

- **PT01-4** Jesús Escobar-Cerezo (IAA, Spain) - *Computational modeling of reflectance spectroscopy for space weathered lunar regolith*
- **PT02-4** Vera Krizova (J. Heyrovsky Institute of Physical Chemistry of the CAS, v. v. i., Czech Republic) - *Ionization and dissociation of major constituents of Titan's atmosphere induced by energetic heavy ions*
- **PT03-4** Germán Molpeceres (Instituto de Estructura de la Materia, IEM-CSIC, Spain) - *Spectroscopy of Methane/Ethylene mixtures*
- **PT04-4** Emmal Safi (Keele University, UK) - *Laboratory Studies of Clathrate Hydrates with Relevance to Icy Solar System Bodies*
- **PT05-4** Giovanni Strazzulla (INAF - Osservatorio Astrofisico di Catania, Italy) - *Ion processing of ices and the origin of SO₂ and O₃ on the surfaces of the icy jovian satellites*
- **PT06-4** Stephen Thompson (Diamond Light Source, UK) - *In situ synchrotron studies of ice during MgSO₄•11H₂O (meridianiite) formation*
- **PT07-4** Vicente Timón (Instituto de Estructura de la Materia, IEM-CSIC, Spain) - *Theoretical UV-VIS spectra of phyllosilicates with astronomical implications*
- **PT08-4** Illia Zymak (J. Heyrovsky Institute of Physical Chemistry of the CAS, v. v. i., Czech Republic) - *Study of gas-phase ion molecular reactions at temperatures relevant to the atmosphere of Titan*

SESSION - The signatures of the evolving interstellar medium

- **PT01-5** Phillipe Brechignac (Institute of Molecular Sciences at Orsay (ISMO), Université Paris-Sud, F-91405 Orsay Cedex, France) - *Charge resonance effects in PAHs clusters cations*
- **PT02-5** Pablo Castellanos (Leiden Observatory, Netherlands) - *Vibrational spectrum of the (doubly dehydrogenated) pyrene cation*
- **PT03-5** Giacomo Mulas (INAF - OAC, Italy) - *Modelling Dust in the Milky Way and Beyond*
- **PT04-5** Ilsa Cooke (University of Virginia, USA) - *Collective Lattice Vibrations of CO₂ in Mixed Ices*
- **PT05-5** Rafael Escribano (Instituto de Estructura de la Materia, IEM-CSIC, Spain) - *Structure and spectra of models of HAC particles*
- **PT06-5** Víctor J. Herrero (Instituto de Estructura de la Materia, IEM-CSIC, Spain) - *Electron irradiation of a-C:H deposits: Effects of cosmic rays on interstellar carbonaceous dust*

- **PT07-5** Ming Chao Ji (Université Paul Sabatier, France) - *Measurements of the collision induced electronic emission cross-sections of pyrene and coronene by 100 keV protons*
- **PT08-5** Annemieke Petrignani (University of Amsterdam, Netherlands) - *Formation of a 5-membered ring in the ionisation of 3-ring H-PAH species*
- **PT09-5** Miroslav Polasek (J. Heyrovsky Institute of Physical Chemistry of the Czech Academy of Sciences, Czech Republic) - *Experimental study of interactions of $2H^+$, He^+ , and He^{2+} with complex interstellar molecules at keV-collision energies*
- **PT10-5** Sarah Rodriguez Castillo (Institut de Recherche en Astrophysique et Planétologie-IRAP/ CNRS, France) - *Investigating the importance of non-planarity in the loss of H/H₂ of isomeric PAHs +*
- **PT11-5** Malcolm Simpson (University of Innsbruck, Austria) - *Towards experimental evidence for the role of permanent dipoles in the formation of molecular anions in the interstellar medium*

SESSION - Dense Clouds: the gas-ice interface and molecular complexity

- **PT01-6** Sean Ayling (University of Sussex, UK) - *Surface Behaviour and Reactivity of Dimethyl Ether on Astrophysically Relevant Surfaces: Experiment and Theory*
- **PT02-6** Jennifer Bergner (Harvard-Smithsonian Center for Astrophysics, USA) - *Kinetics and mechanisms of the reaction between NH₃ and HCOOH in interstellar ice analogs*
- **PT03-6** P. Brandon Carroll (National Radio Astronomy Observatory, Charlottesville, USA) - *Interstellar Propylene Oxide and Non-Thermal Chemistry in the C₃H₆O Family Toward Sgr B2*
- **PT04-6** Qiang Chang (Xinjiang Astronomical Observatory, Chinese Academy of Sciences, China) - *Effect of stochastically grain heating on the chemistry of molecule clouds*
- **PT05-6** Qiang Chang (Xinjiang Astronomical Observatory, China) - *A Fast Macroscopic Monte Carlo Method for gas-grain chemical simulations*
- **PT06-6** Ko-Ju Chuang (Leiden Observatory, Netherlands) - *H-atom addition and abstraction reactions in mixed CO, H₂CO and CH₃OH ices – an extended view on complex organic molecule formation*
- **PT07-6** Aspen R. Clements (University of Virginia, USA) - *Monte Carlo modeling of astrochemically relevant temperature-programmed desorption experiments*
- **PT08-6** Sara Cuadrado (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *Complex organic molecules in the Orion Bar PDR*
- **PT09-6** Andrew Gibbons (Université Libre de Bruxelles (ULB) / Royal Belgian Institute for Space Aeronomy (BIRA-IASB), Belgium) - *Modelling surface desorption processes for cometary chemistry and astrochemistry*

- **PT10-6** Barbara Michela Giuliano (Max-Planck-Institut für extraterrestrische Physik, Germany) - *Optical Characterization of Interstellar Ice Analogues*
- **PT11-6** Marcin Gronowski (Institute of Physical Chemistry Polish Academy of Sciences, Poland) - *Does HCNH⁺ react in the gas-phase with sulfur or sulfur-bearing neutral diatomic molecules?*
- **PT12-6** Guillaume Jumet (Service de Chimique Quantique et Photophysique (CQP), Belgium) - *Theoretical study of CH₄ + H reaction on surface of methane ice*
- **PT13-6** Vincent Kofman (Leiden Observatory, Netherlands) - *Triphenylene and its radical cation studied by UV-VIS spectroscopy in argon and water matrices at 12K*
- **PT14-6** Krim Lahouari (Pierre and Marie Curie University, France) - *The chemistry of nitrogen in dense molecular clouds*
- **PT15-6** Nuria Marcelino Lluch (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *DCN and DNC in Orion KL as seen by ALMA*
- **PT16-6** Belén Maté (Instituto de Estructura de la Materia, IEM-CSIC, Spain) - *Diffusion of methane on amorphous solid water*
- **PT17-6** Brett A. McGuire (National Radio Astronomy Observatory, Charlottesville, USA) - *SOFIA FIFI-LS as a THz Ice Instrument*
- **PT18-6** Elena Moreno (Instituto de Ciencia de Materiales de Madrid, CSIC / Centro de Astrobiología, CSIC-INTA), Spain) - *Processing of H₂O:CO:NH₃ ice analog mixtures*
- **PT19-6** Yasuhiro Oba (Institute of Low Temperature Science, Hokkaido University, Japan) - *Hydrogen-deuterium substitution of solid dimethyl ether by reaction with deuterium atoms at 15 K*
- **PT20-6** Pilar Redondo (Universidad de Valladolid, Spain) - *Resilience of the ice in the interstellar medium*
- **PT21-6** Carlotta Scirè (INAF-OACT, Italy) - *"SPESS" a tool for the thickness measurement of thin ice films*
- **PT22-6** Frederik Doktor Skødt Simonsen (Department of Physics and Astronomy, Denmark) - *Investigating Superhydrogenated Polycyclic Aromatic Hydrocarbons as catalysts for Interstellar H₂ formation*
- **PT23-6** Dahbia Talbi (LUPM CNRS-Université de Montpellier, France) - *Diffusion and reactivity of NH₃ and CO₂ in a water ice model: A theoretical study*
- **PT24-6** Belén Tercero (Instituto de Ciencia de Materiales de Madrid, CSIC - Spain) - *CH₃NCO: a missing species in the physical and chemical studies of hot cores*
- **PT25-6** Riccardo G. Urso (Dipartimento di Scienze Chimiche, Università degli Studi di Catania, INAF-Osservatorio Astrofisico di Catania, Italy) - *Combined IR and Raman study of solid CO*
- **PT26-6** Eric R. Willis (University of Virginia, USA) - *Monte Carlo kinetics simulations of the grain-surface back-diffusion effect*

- **PT27-6** Anders Witte Skov (Aarhus University, Denmark) - *The interaction between atomic hydrogen and polycyclic aromatic hydrocarbons on graphite – H₂ formation in the interstellar medium*

SESSION - Chemical fingerprints of star formation

- **PT01-7** Elena R. Alonso (Universidad de Valladolid, Spain) - *The millimeter wave spectra of vinyl formate and methoxyamine: laboratory studies and astronomical searches in space*
- **PT02-7** Oskar Asvany (I. Physikalisches Institut, Germany) - *Double resonance rotational spectroscopy in cryogenic ion traps: application to deuterated molecular ions*
- **PT03-7** Moncef Bouledroua (Faculté de Médecine & LPR / Badji Mokhtar University, Algeria) - *Radiative association of ³⁶Ar⁺ and ³⁸Ar⁺ with hydrogen*
- **PT04-7** Ana Chacón-Tanarro (Max Planck Institute for extraterrestrial Physics, Germany) - *Grain growth towards the pre-stellar core L1544*
- **PT05-7** Qiang Chang (Xinjiang Astronomical Observatory, Chinese Academy of Sciences, China) - *Hot Cores Chemistry Simulation Using Monte Carlo Model Including Bulk Diffusion and Photodissociation in Ice Mantles*
- **PT06-7** Jose M^a Fernández (Instituto de Estructura de la Materia CSIC, Spain) - *New experiments and assignments of the torsional spectrum of dimethyl-ether*
- **PT07-7** Maryvonne Gerin (LERMA, France) - *The young protostars B1b-S and B1b-N*
- **PT08-7** Marta I. Hernández (Instituto de Física Fundamental, CSIC, Spain) - *H₂ O-He and H₂ O-H₂ O collisions: Pressure Broadening and Rate Coefficients*
- **PT09-7** Alicia López Jiménez (Instituto de Ciencia de Materiales de Madrid-CSIC, Spain) - *C₂H₄O₂ isomers in Orion KL: Methyl formate, Acetic acid, and Glycolaldehyde*
- **PT10-7** Pablo del Mazo Sevillano (Instituto de Física Fundamental, IFF-CSIC, Spain) - *Potential Energy Surface for the H₂CO + OH reaction*
- **PT11-7** Antonio J. Ocaña (University of Castilla-La Mancha, Spain) - *Kinetics of the depletion of H₂CO by reaction with OH radicals at temperatures of the ISM (22-107 K)*
- **PT12-7** Víctor M. Rivilla (Arcetri Astrophysical Observatory, Italy) - *First detections of the key prebiotic molecule PO in star-forming regions*
- **PT13-7** Maria Luisa Senent (Instituto de Estructura de la Materia-CSIC, Spain) - *Structural and spectroscopic characterization of Methyl Isocyanate and various isomers using highly correlated ab initio methods*
- **PT14-7** Silvia Spezzano (Max Planck Institute for Extraterrestrial Physics, Germany) - *Chemical differentiation in L1544*

- **PT15-7** Isabel Tanarro (Instituto de Estructura de la Materia-CSIC, Spain) - *Astronomical radioreception techniques to detect the emission of molecular and short lived species in a cold plasma/gas chamber*
- **PT16-7** Nadine Wehres (University of Cologne, Institute of Physics, Germany) - *Heterodyne Receiver for Laboratory Spectroscopy of Molecules of Astrophysical Importance*
- **PT17-7** Carlo Maria Zolf (Observatoire de Paris, France) - *BASECOL scientific and technical quality evolution*

SESSION - Supernovae and shocks: high-energy processing of matter

- **PT01-8** Daniele Rogantini (SRON, Netherlands) - *Interstellar dust radiography: investigating iron dust grain composition*