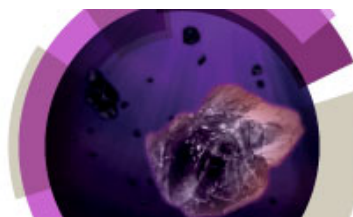


Astrochemistry of Dust, Ice and Gas

Faraday Discussion 168



7-9 April 2014
Leiden, The Netherlands

Monday 7 April

11:00	Registration, Tea and Coffee	
12:00	Lunch	
12.45	Welcome and Introductions	
13.00	Introductory Lecture Ewine van Dishoeck <i>Leiden Observatory, The Netherlands</i>	Paper 1
	Session 1 Observations on Dust, Ice and Gas Relevant to Astrochemistry Session Chair: Tom Millar	
14:00	The Chemistry of Planet-forming Regions is not Interstellar Klaus M. Pontoppidan*, Sandra Blevins <i>Space Telescope Science Institute, USA</i>	Paper 2
14:05	Complex Molecule Formation Around Massive Young Stellar Objects Karin Öberg*, John B Reiter, Edith C. Fayolle, Claudia Cyganowski <i>Harvard University, USA</i>	Paper 3
14:10	Chemical Complexity in the Horsehead, Photo-dissociation Region Viviana Guzmán*, Jérôme Pety, Pierre Gratier, Javier Goicoechea, Maryvonne Gerin, Evelyne Roueff, Franck Le Petit, Jacques Le Bourlot <i>IRAM, France</i>	Paper 4
14:15	Discussion	
15:30	Afternoon Tea	
16:00	Exploring the Origins of Carbon in Terrestrial Worlds Edward Bergin* L. Ilsecore Cleeves, Nathan Crockett and Geoffrey Blake <i>University of Michigan, USA</i>	Paper 6
16.05	Discussion	
17:00	Poster Session and Wine Reception	
19:30	Dinner	

Tuesday 8 April

	Session 2: Laboratory Astrochemistry of Dust and Ice Session Chair: Wendy Brown	
09:00	Efficient Diffusive Mechanisms of O Atoms at Very Low Temperatures on Surfaces of Astrophysical Interest Emanuele Congiu*, Marco Minissale, Saoud Baouche, Stephanie Cazaux, Henda Chaabouni, Giulio Manicò, Audrey Moudens, Valerio Pirronello, François Dulieu <i>LERMA Observatoire de Paris & Université de Cergy-Pontoise, France</i>	Paper 7
09:05	Single and Double Addition of Oxygen Atoms to Propyne on Surfaces at Low Temperatures Stephen Price*, Helen Kimber, Courtney P. Ennis <i>University College London, UK</i>	Paper 8
09:10	Reaction Kinetics and Isotope Effect of Water Formation by the Surface Reaction of Solid H₂O₂ with H Atoms at Low Temperatures Yasuhiro Oba*, Kazuya Osaka, Naoki Watanabe, Takeshi Chigai, Akira Kouchi <i>Institute of Low Temperature Science, Hokkaido University, Japan</i>	Paper 9
09:15	Diffusion of Atomic Oxygen Relevant to Water Formation in Amorphous Interstellar Ices Markus Meuwly* Myung Won Lee <i>University of Basel, Switzerland</i>	Paper 10
9:20	Discussion	
11:00	Morning Tea	
11:30	Polycyclic Aromatic Hydrocarbons - Catalysts for Molecular Hydrogen Formation L. Hornekær* A.L. Skov, J. D. Thrower <i>Aarhus University, Denmark</i>	Paper 11
11:35	Electron Induced Chemistry: A New Frontier in Astrochemistry Nigel Mason* Binukumar Nair, Sohan Jheeta, Ewelina Szymanska <i>The Open University, UK</i>	Paper 12
11:40	Low-Energy Electron-Induced Chemistry of Condensed Methanol: Implications for the Interstellar Synthesis of Prebiotic Molecules Christopher Arumainayagam* Mavis D. Boamah, Kristal K. Sullivan, Katie E. Shulenberger, ChanMyae M. Soe, Lisa M. Jacob, Farrah C. Yhee, Karen E. Atkinson, Michael C. Boyer, David R. Haines <i>Wellesley College, USA</i>	Paper 13
11:45	Stability of Carbonaceous Dust Analogues and Glycine Under UV Irradiation and Electron Bombardment Belén Maté*, Víctor J Herrero, Miguel Jiménez-Redondo, Isabel Tanarro, Yamilet Rodríguez-Lazcano, Óscar Gálvez, Rafael Escribano <i>Instituto de Estructura de la Materia, IEM-CSIC, Spain</i>	Paper 14
11:50	Discussion	

13:30	Lunch	
	Session 3: Astrophysical Modelling Session Chair: Robin Garrod	
14:30	The Cycling of Carbon Into and Out of Dust Anthony Jones*, Lapo Fanciullo, Melanie Köhler, Laurent Verstraete, Vincent Guillet, Marco Bocchio, Nathalie Ysard, Elisabetta Micelotta <i>Institut d'Astrophysique Spatiale, France</i>	Paper 15
14:35	The Formation of Ice Mantles on Interstellar Grains Revisited – the Effect of Exothermicity Herma Cuppen*, T. Lamberts, X. de Vries <i>Radboud University Nijmegen, The Netherlands</i>	Paper 16
14:40	Characterizing the Chemical Pathways for Water Formation – a Deep Search for Hydrogen Peroxide Bérengère Parise, Per Bergman, Karl Menten <i>Max Planck Institute for Radio Astronomy, Germany</i>	Paper 17
14:45	Discussion	
16:00	Afternoon Tea	
16:30	The Formation of Glycine and Other Complex Organic Molecules in Exploding Ice Mantles Jonathan Rawlings*, David Williams, Serena Viti, Cesare Cecchi-Pestellini, Walt Duley <i>University College London, UK</i>	Paper 18
16:35	Complex Organic Molecules Along the Accretion Flow in Isolated and Externally Irradiated Protoplanetary Disks Catherine Walsh*, Tom Millar, Hideko Nomura, Eric Herbst, Susanna Widicus Weaver <i>Leiden Observatory, The Netherlands</i>	Paper 19
16:40	Discussion	
17:30	Close of sessions	
19:00	Pre-Dinner Drinks	
19:30	Conference Dinner	

Wednesday 9 April

	Session 4: New Directions in Solid and Surface Astrochemistry Session Chair: Harold Linnartz	
09:00	Cold Condensation of Dust in the ISM Gaël Rouillé*, Cornelia Jäger, , Sergiy Krasnokutskiy, Thomas Henning <i>Max Planck Institute for Astronomy, Heidelberg, Germany</i>	Paper 20
09:05	THz and mid-IR Spectroscopy of Interstellar Ice Analogs: Methyl and Carboxylic Acid Groups Sergio Ioppolo*, Marco Allodi, Brett McGuire, Matthew Kelley, Geoffrey Blake <i>California Institute of Technology, USA</i>	Paper 21
09:10	Infrared and Reflectron Time-of-flight Mass Spectroscopic Study on the Synthesis of Glycolaldehyde in Methanol (CH₃OH) and Methanol-carbon Monoxide (CH₃OH-CO) Ices Exposed to Ionization Radiation Ralf-Ingo Kaiser*, Surajit Maity, Brant M. Jones <i>University of Hawaii, USA</i>	Paper 22
09:15	Discussion	
10:30	Morning Tea	
11:00	Application of a Diffusion-Desorption Rate Equation Model in Astrochemistry Gianfranco Vidali* Jiao He <i>Syracuse University, USA</i>	Paper 23
11:05	Wavelength Resolved UV Photodesorption and Photochemistry of CO₂ Ice Jean-Hugues Fillion* E. C. Fayolle, X. Michaut, M. Doronin, L. Philippe, J. Rakovsky, C. Romanzin, N. Champion, K. I. Öberg, H. Linnartz and M. Bertin <i>Université Pierre et Marie Curie, France</i>	Paper 24
11:10	Free-electron Laser Induced Processes in Thin Molecular Ice Helmut Zacharias* Björn Siemer, Sebastian Roling, Robert Frigge, Tim Hoger, Rolf Mitzner <i>University of Münster, Germany</i>	Paper 25
11:15	Discussion	
12:30	Concluding remarks Eric Herbst <i>University of Virginia, USA</i>	Paper 26
13:15	Acknowledgements	
13:30	Close of meeting and Lunch	