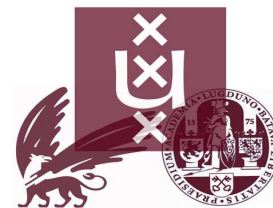


Holland Research School
of Molecular Chemistry



Announcement October 1, 2011

Holland Research School of Molecular Chemistry honors innovative PhD-thesis work

Dick Stufkens Prijs 2011 awarded to (astro)chemist Sergio Ioppolo

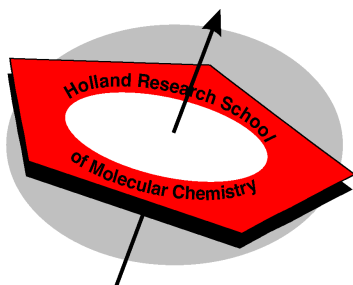


The Dick Stufkens Prijs 2011 is awarded to Dr. Sergio Ioppolo. The prize is given for his Ph.D. thesis "*Surface Formation Routes of Interstellar Molecules*", in which he describes the construction of a laboratory-based instrument enabling the simulation of interstellar conditions and the observation of chemical reactions under such conditions. The Dick Stufkens Prijs is an annual prize, awarded to the best thesis of a Ph.D. student belonging to the Holland Research School of Molecular Chemistry (HRSMC). The prize consists of a certificate and an amount of 1.000 euro. Prof. dr. J. W. Verhoeven will present the prize to the winner on November 4 during the annual HRSMC symposium in Amsterdam. At the symposium the laureate will present a lecture on the work described in his thesis.

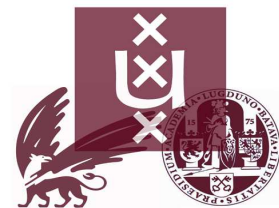
Since the galactic space is largely empty and may be considered as a near-perfect vacuum with extremely low particle densities it has been a puzzling observation that in this space rather complex (organic) molecules – albeit at low density - occur and seem to be constantly formed. For decades astrochemists have tried to explain this chemical complexity but it has turned out that the occurrence of gas-phase reactions cannot account for the observed abundances of many stable and organic molecules. It now has become clear that such species – which are considered as prebiotic species yielding the chemical building blocks of molecules of direct interest to life – can form on the ultracold surfaces of interstellar dust grains. Gas-phase molecules accrete on these surfaces resulting in an "ice" layer. Chemical reactions are subsequently initiated by external triggers, such as irradiation with energetic radiation or bombardment with elementary (atomic) particles. Sergio Ioppolo has constructed a laboratory based ultrahigh vacuum instrument in which such reactions can be initiated and studied quantitatively. During his PhD research he was able to reveal the formation of species such as water, carbon dioxide, formic acid, formaldehyde and methanol. Especially water and methanol are known to be a chemical starting point for more complex species in space and are therefore particularly important in astrochemical research directed at the understanding of the evolution of pre-biotic building blocks.

The jury of the Dick Stufkens Prijs is impressed by the quality, the originality and the interdisciplinary character of Sergio Ioppolo's PhD Thesis and expects that the work of Sergio Ioppolo will have considerable impact. Sergio's work already led to no less than 9 publications in the international scientific literature.

Sergio performed his research in the Sackler Laboratory for Astrophysics at the Leiden Observatory of the Leiden University and also in part outside Leiden at the Catania Observatory. He defended his thesis on December 9, 2010 (promoters prof. dr. H.V.J. Linnartz and prof. dr. E.F. van Dishoeck, copromotor dr. H.M. Cuppen). Presently Sergio is extending his work at Leiden University for one more year in order to expand the scope and complexity of reactions that can be studied using the instrumentation that he constructed as part of his thesis.



Holland Research School of Molecular Chemistry



About the HRSMC

The Holland Research School of Molecular Chemistry was founded in 1994 and has been accredited by the Royal Academy of Arts and Sciences (KNAW). The research school combines experimental and theoretical groups working on molecular chemistry and physics from the Universiteit van Amsterdam, the Vrije Universiteit Amsterdam and the Universiteit Leiden. Apart from creating the appropriate conditions for further collaboration between the participating groups, the school also provides an internationally highly acclaimed teaching programme for PhD students. Prof. Dick Stufkens[†], scientific director during the 1997-2001 period, has been one of the driving forces behind the HRSMC. His efforts have, amongst others, contributed significantly to the international reputation of the HRSMC.

On November 4, the Dick Stufkens Prijs 2011 will be presented by prof.dr. J.W. Verhoeven during the annual HRSMC symposium. This year the symposium will be organized at the VU University. Apart from Sergio Ioppolo, who will give a lecture on his PhD research, various HRSMC PhD students and staff members will present lectures and posters. A guest lecture will be given by Prof. P. Gros from Utrecht University. The symposium is open for non-HRSMC members, for further information go to

http://www.hrsmc.nl/drupal/programme_symposium2011.

Website: <http://www.hrsmc.nl/>