

Loretta Pretto

Loretta Pretto was born in Verona in 1976. Doctor in Chemistry from the University of Ferrara in 2000, she obtained a PhD in Chemical Sciences in Ferrara (March 2004) under the supervision of Professor Gastone Gilli, on the project 'Factors Affecting the Hydrogen Bond Strength: pK_a Matching, Proton Affinities Equalization, Chemical Leitmotifs and Shape of Proton-Transfer Reaction Pathways'. In 2003 she worked for a four months period at the 'Laboratoire de Cristallographie' in Nancy directed by Professor Claude Lecomte, to carry out experimental electron density studies. Since 2004 she's a post-doctoral of the University of Ferrara.



The scientific interests of Dr. Loretta Pretto are in the field of Structural Chemistry and Molecular Interactions, in particular Hydrogen Bonds (HBs), with the aim to understand the factors determining HB energies.

The combined use of different techniques, such as X-ray crystallography at variable temperature, structure correlation methods and quantum-mechanical calculations, has allowed to identify the molecular patterns necessary to give rise to strong HBs, and to correlate the HB strength with the physico-chemical properties of the HB donors and acceptors moieties and with the shape of the Proton Transfer reaction pathways.

The Italian Association of Crystallography has awarded the 'Mario Nardelli' Prize 2007 to Loretta Pretto with the motivation:

For the high-level results obtained in cooperation with international research groups to provide a novel approach to interpret and predict hydrogen-bonded molecular systems via data mining, theoretical calculations and diffractometric techniques, and for the efforts in the organization of the scientific activities of AIC.