

Biography



Jean-Marie Lehn

Jean-Marie Lehn became Professor of Chemistry at the Université Louis Pasteur in Strasbourg in 1970 and from 1979 to 2010 he was Professor at the Collège de France in Paris. He is presently Professor at the University of Strasbourg Institute for Advanced Study (USIAS). He shared the Nobel Prize in Chemistry in 1987 (with Donald Cram and Charles Pedersen) for his studies on the chemical basis of “*molecular recognition*” (i.e. the way in which a receptor molecule recognizes and selectively binds a substrate), which also plays a fundamental role in biological processes.

Over the years his work led him to the definition of a new field of chemistry, which he has proposed calling “*supramolecular chemistry*” as it deals with the complex entities formed by the association of two or more chemical species held together by non-covalent intermolecular forces, whereas molecular chemistry concerns the entities constructed from atoms linked by covalent bonds. Subsequently his work developed into the chemistry of *self-organization* processes, based on the design of “programmed” chemical systems that undergo spontaneous assembly of suitable components into well-defined supramolecular species, directed by the supramolecular processing of molecular information. More recently, the implementation of dynamic features and of selection in both molecular and supramolecular chemistry led to the development of “*constitutional dynamic chemistry*”, concerning entities able to undergo reorganization in response to external stimuli, thus leading to the emergence of an “*adaptive and evolutive chemistry*” towards a *chemistry of complex matter*.

Author of more than 1000 scientific publications, Lehn is a member of many academies and institutions. He has received numerous international honours and awards.