



The Birth of the 3rd Dimension in Chemistry Symposium, Spring National ACS Meeting 2024

Stamps are Planar, Carbon is Not: A Philatelic History of Stereochemistry

Daniel Rabinovich, Dan.Rabinovich@uncg.edu. Dept. of Nanoscience, Joint School of Nanoscience and Nanoengineering, Greensboro, North Carolina, United States

Stereochemistry, the branch of chemistry dealing with the three-dimensional arrangement of atoms and molecules in space, and how it affects chemical reactivity, is of critical importance in biological systems and the pharmaceutical industry. This presentation will use postage stamps to discuss some milestones in the development of modern stereochemistry, starting with the pioneering work of Louis Pasteur, who discovered molecular chirality and spontaneous resolution in 1848 by studying crystals of tartaric acid and various tartrate salts. The seminal 1874 contributions of Jacobus H. van't Hoff in the Netherlands and Joseph Le Bel in France, who independently explained optical activity in terms of the tetrahedral arrangement of the atoms bound to carbon, will be described. And the work of Vladimir Prelog, who shared with John Cornforth the 1975 Nobel Prize in Chemistry "for his research into the stereochemistry of organic molecules and reactions", will be outlined.

History of Catalysis Symposium, Spring National ACS Meeting 2024

Karl Ziegler and Giulio Natta and Their Impact on Modern Catalysis

Pete Villarreal, pete.villarreal@students.tamuk.edu, Christine Hahn. Department of Chemistry, Texas A&M University-Kingsville, Kingsville, Texas, United States

Karl Ziegler (1898-1973) and Giulio Natta (1903-1979) are two renowned chemists famous for their development and application of what is known as the Ziegler-Natta catalyst. Their pioneering work in titanium-based catalysts in the synthesis of 1-alkene polymers helped to revolutionize chemistry, industry, and commercial manufacturing. This talk aims to highlight their lives, achievements, and contributions to the field of chemistry and catalysis, as well as looking at the improvements that have been made to the modern world due to their work.