

Fraser Stoddart / Biosketch 350 Words

Fraser Stoddart, presently a Board of Trustees Professor of Chemistry at Northwestern University, was previously (1997-2002) the Saul Winstein Professor of Chemistry at the University of California, Los Angeles (UCLA) before holding the Fred Kavli Chair of NanoSystems Sciences at UCLA while he was the Director of the California NanoSystems Institute (CNSI) from 2002-2007. Stoddart pioneered the development of the use of molecular recognition and self-assembly processes in template-directed protocols for the synthesis of mechanically interlocked molecules (MIMs), i.e., bistable catenanes and rotaxanes. These MIMs led to the design and syntheses of molecular shuttles, switches, and machines. Fraser obtained all his degrees (BSc / PhD / DSc) from Edinburgh University and has spent time (1967-1970) at Queen's University in Canada, Imperial Chemical Industries' Corporate Laboratory (1978-1981), as well as at the Universities of Sheffield (1970-1990) and Birmingham (1990-1997) in the UK before moving to the US in 1997. He was made a Knight Bachelor by Her Majesty Queen Elizabeth II in her 2007 New Year's Honors List for his services to chemistry and molecular nanotechnology. He is a Fellow of the Royal Society of London, the German Academy (Leopoldina) of Natural Sciences, the Royal Netherlands Academy of Arts and Sciences, and the American Chemical Society, as well as an Honorary Fellow of the Royal Society of Edinburgh and the Royal Society of Chemistry. His awards include the King Faisal International Prize in Science (2007), the Albert Einstein World Award of Science (2007), the Feynman Prize in Nanotechnology (2007), the Royal Medal (2010), and the Nobel Prize in Chemistry (2016). He received the Science and Technology Cooperative Award from the Chinese Government in 2019. He was elected a Member of the American Academy of Arts and Sciences in 2012, the National Academy of Sciences in 2014, a Foreign Member of the Chinese Academy of Sciences in 2018, and the National Academy of Inventors (2020). During the past five decades, he has mentored >500 graduate students and postdoctoral scholars from over 50 different countries.