Sir J. Fraser Stoddart to Speak at Andrews

Thursday, April 18, in the Newbold Auditorium, Buller Hall

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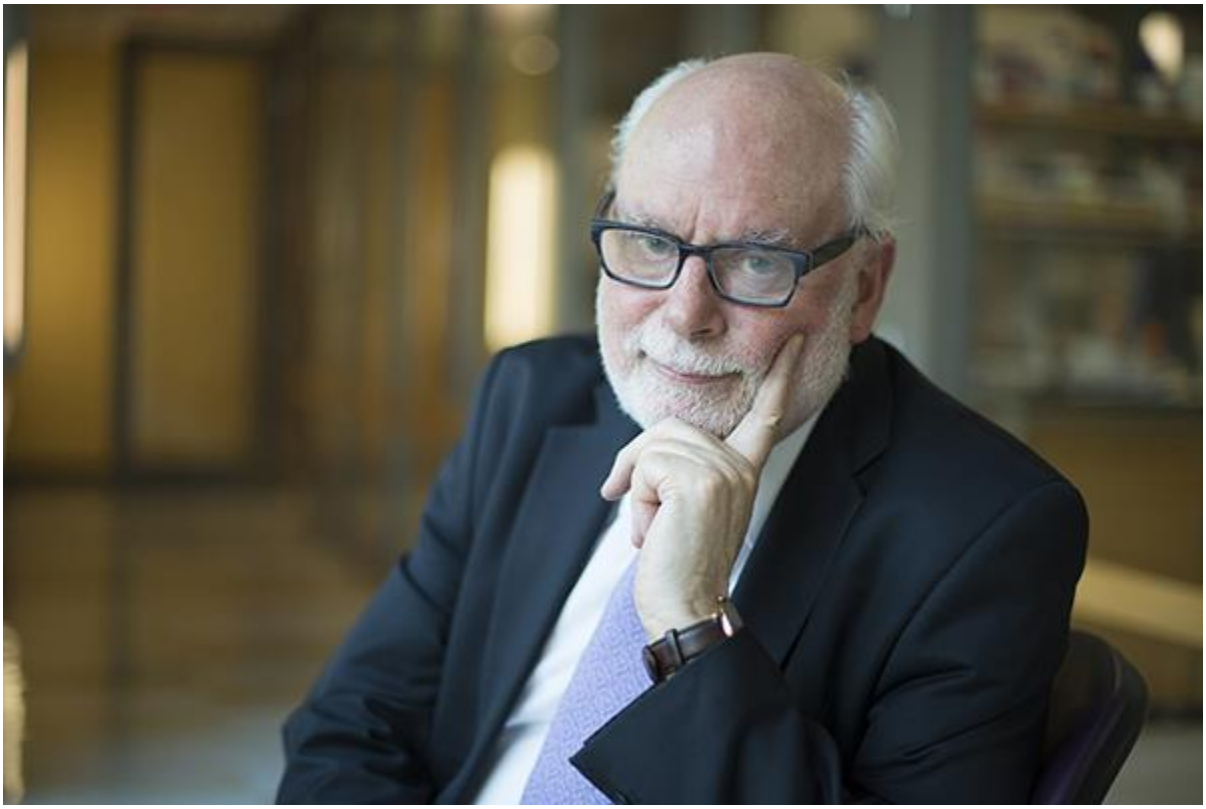

Sir J. Fraser Stoddart, recipient of the Nobel Prize in Chemistry 2016 (Photo by Jim Prisching)

By: Desmond Murray, associate professor of chemistry

The Andrews University Department of Chemistry & Biochemistry will host a lecture by Nobel Prize winner Sir J. Fraser Stoddart on Thursday, April 18, at 4:30 p.m. EST in Newbold Auditorium, Buller Hall. Stoddart will speak on “Engines Through the Ages,” a topic designed to take a general public audience on a journey from steam engines to molecular machines.

Stoddart, professor of chemistry at Northwestern University in Evanston, Illinois, received the Nobel Prize in Chemistry 2016. He shared this honor “for the design and synthesis of molecular machines” with two other molecular machinists, Jean-Pierre Sauvage, of the University of Strasbourg in France, and Bernard L. Feringa, of the University of Groningen, the Netherlands.

Stoddart grew up on a remote farm in the post-World War II environs of Edinburgh. After attending a local village school, he went on to obtain degrees from Edinburgh University, including a PhD in chemistry that involved research on the natural gums of acacias. He spent time in various positions at Queen’s University in Canada and Imperial Chemical Industries and the Universities of Sheffield and Birmingham in the United Kingdom before moving to the U.S. in 1997, where he was professor of chemistry at the University of California, Los Angeles, until 2008.

In 1991, Stoddart published seminal work that unequivocally demonstrated and established the importance of the mechanical bond, which was then relatively new to chemistry but which is central and foundational to the design and function of molecular machines. Since then he and his students have created a diverse array of mechanically interlocked molecules (MIMs) including molecular switches, elevators, pumps and drug delivery systems. Along the way, using this same mechanochemistry, they have had fun creating molecular versions of the Olympic symbol with its five interlocking rings as well as interesting knots and Borromean rings. More information about this revolution in chemistry can be found in Stoddart's 2017 book "The Nature of the Mechanical Bond: From Molecules to Machines," which brings to life, in words and pictures, the ubiquity, functionality and beauty of the mechanical bond in nature, art and everyday life and living.

Stoddart has over 1,150 publications and numerous recognitions and accolades—including being honored in 2007 by Her Majesty Queen Elizabeth II as a Knight-Bachelor for his services to chemistry and molecular nanotechnology. The two central driving motivations of his life's work, though, are teaching and mentoring more than 450 students from over 43 different countries and his insatiable search for beauty, evidenced by his lifelong fascination with stereochemistry and topology and his fondness of poetry.

Keith Mattingly, dean of the College of Arts & Sciences, notes, "Andrews University is proud of its Department of Chemistry & Biochemistry, accredited by the American Chemical Society, and its longstanding seminar program that serves both to educate our students on campus and as a vehicle of public, cutting-edge science in our local community and beyond. We are honored that a Nobel Laureate of Sir Fraser Stoddart's stature will be presenting a lecture on our campus."

Andrea Luxton, Andrews University president, reaffirmed these sentiments, saying, "The University is delighted to welcome a guest of such renown. Sir Fraser Stoddart is an exemplary educator, researcher and innovator, as evidenced by his illustrious career and, most notably, the honor of receiving the 2016 Nobel Prize."

Stoddart's lecture is the final guest lecture in the Department of Chemistry & Biochemistry 2018–2019 Dwain L. Ford Guest Lecture Series and is the first time the department has hosted a Nobel Laureate. The lecture series is co-sponsored by the Andrews University Office of Research & Creative Scholarship and by the Berrien County Regional Education Service Agency.

All are invited to attend Stoddart's lecture on the campus of Andrews University. For those unable to attend, a livestream will be available at https://andrews.zoom.us/j/796347035.