National Science Foundation
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**Press Statement 16-009**

# Chemistry Nobel Prize 2016

**NSF director congratulates chemistry Nobel Prize laureates**

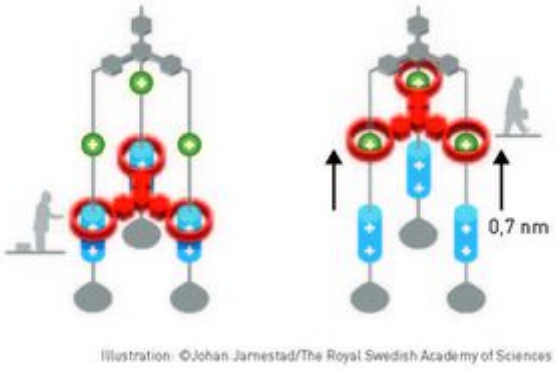


Illustration: ©Johan Jarnestad/The Royal Swedish Academy of Sciences

The diagram depicts a molecular lift which can raise itself 0.7 nanometers above a surface.

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**October 5, 2016**

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*Statement from National Science Foundation Director France Córdova regarding the news that NSF-funded chemist Fraser Stoddart of Northwestern University was one of an international group awarded the 2016 Nobel Prize in Chemistry:*

The National Science Foundation congratulates today's Nobel Prize winners in chemistry for their extraordinary achievement in designing molecular machines with controllable movements. We are especially proud to recognize the work of Northwestern University's Fraser Stoddart, whose efforts to develop rotaxane -- a molecular structure that represents a revolutionary step in the miniaturization of technology -- our agency helped fund.

Stoddart's ability to move a nano-sized ring up and down the length of a molecular axle demonstrated control of movement at the molecular level, making possible the design and manufacture of molecular staircases, molecular muscles and molecule-based computer chips. Stoddart, and his fellow Nobel Prize awardees --

University of Strasbourg's Jean-Pierre Sauvage and University of Groningen's Bernard Feringa -- have laid the groundwork for new types of molecular motors and an assortment of nanoscale machines.

Today, we offer our heartiest congratulations to this Nobel trio, whose fundamental scientific research will inspire current and future generations of scientists and engineers and expand the frontiers of molecular machinery, possibly creating and manipulating new molecules and sensors and finding new ways to store and conduct energy.

-NSF-

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