Curriculum Vitae Prof. Dr. Ben L. Feringa

Photo: University of Groningen

Name: **Ben L. Feringa**
Born: **18 May 1951**

Major Scientific Priorities: Synthetic chemistry, Molecular Nanoscience, Catalysis, Supramolecular Chemistry, Photopharmacology

Ben L. Feringa is a chemist. His research focuses on organic chemistry and molecular nanotechnology. He was the first to develop a molecular motor. In 2016 he was awarded the Nobel Prize in Chemistry for “the design and synthesis of molecular machines” together with Jean-Pierre Sauvage and Fraser Stoddart.

Academic and Professional Career

since 2017	Co-Director of Feringa Nobel Prize Scientist joint Research Center, ECUST, Shanghai, China
since 2011	Hans Fischer Honorary Fellow, Institute for Advanced Studies, TU Munich, Germany
since 2008	Academy Professor, Royal Netherlands Academy of Sciences
since 2003	Jacobus H. van 't Hoff Distinguished Professor of Molecular Science University of Groningen, Netherlands
2003 - 2011	Director Stratingh Institute for Chemistry, University of Groningen, Netherlands
1991 - 1995	Chairman, Department Organic and Molecular Inorganic Chemistry, University of Groningen, Netherlands
since 1988	Appointed successor of Prof. Dr. H. Wynberg; chair of Organic Chemistry, Professor of Organic Chemistry, University of Groningen, Netherlands
1984 - 1988	Lecturer Organic Chemistry, University of Groningen, Netherlands
1983 - 1984	Project Leader Homogeneous Catalysis, Shell Research Laboratories, Amsterdam, Netherlands

1982 - 1983	Research Chemist (Bioorganic Chemistry), Shell Biosciences Laboratories, Sittingbourne, UK
1979 - 1982	Lecturer Amsterdam (Hogere Analistenschool)
1978 - 1984	Research Chemist (organic synthesis, oxidation processes, photochemistry), Royal Dutch Shell, Shell Laboratories, Amsterdam, Netherlands
1978	PhD at Department of Organic Chemistry, University of Groningen, Netherlands
1969 - 1978	Undergraduate and graduate studies in chemistry, University of Groningen, Netherlands

Functions in Scientific Societies and Committees

since 2019	Member ERC Scientific Council
2014	Member, International Academic Advisory Board, Max-Planck-Institute
2014	Chairman, International Janssen Pharmaceutical Prize
2013 - 2018	Appointed Member of Council, Royal Society of Chemistry, UK
2013	Co-Chairman and Organizer, ArmChemFront 2013 Conference
2012	Tetrahedron Chair at BOSS symposium
2011 - 2016	Vice-president, Royal Netherlands Academy of Arts & Sciences (KNAW)
2011	Member, International Scientific Advisory Board, Swiss Federal Institute of Technology (ETH) Zurich, Switzerland
2010 - 2016	Chair Netherlands Science Foundation, Chemical Division
2010	Member and Executive Director, ACS 2010 Board, American Chemical Society, Washington, DC, USA
2009	President of Bürgenstock Conference, Switzerland
2007	Member, International Scientific Advisory Board, Wissenschaftsrat, Berlin, Germany
2007	Co-Chairman and Organizer, International CD Conference (with E.W. Meijer)
2002 - 2006	Founding Scientific Editor of the RSC Journal Organic & Biomolecular Chemistry
2001	President, European Symposium on Organic Chemistry, ESOC-12, Groningen, Netherlands
2001 - 2005	International Scientific Advisory Board, Max Planck Institute for coal research, Mühlheim/Ruhr, Germany

Co-Founder, Contract Research Company SELACT (now KIADIS)

Founder and Director, Stratingh Institute for Chemistry, University of Groningen, Netherlands

Member, Evaluation committee Topinitiativen, German Research Community

Chair, Executive Board, Advanced Research Center Chemical Building Blocks Consortium (ARC CBBC), Netherlands

Scientific Advisor Board, Institute of Science and Technology Austria (IST Austria), Austria

Editorials and Member in Editorial Boards:

Chair, Editorial Board, Chemistry World, Royal Society of Chemistry, UK

Member, Editorial Board, Journal of the Chemical Society, Faraday Transactions; Advanced Synthesis and Catalysis; Adv. Phys. Org. Chem.; Topics in Stereochemistry; Macromolecular Rapid Communications

Member, Editorial Advisory Board, Chemical Communications; Journal of Organic Chemistry; Chemistry, an Asian Journal; Organic & Biomolecular Chemistry

Member, International Advisory Board, Israel Journal of Chemistry

Honours and awarded Memberships

since 2023	Member, National Academy of Science (NAS), USA
since 2020	Foreign Member of the Royal Society
2019	Asteroid named after him "(12655) Benferinga" (2019)
since 2019	Member of the National Academy of Sciences Leopoldina, Germany
2019	Slovak Chemical Society Gold Medal
2019	Gold Medal, Comenius University Bratislava, Slovakia
2019	Magnolia Silver Award, Shanghai Municipal People's Government, China
2019	Honorary Doctorate, University of Santiago de Compostela, Spain
2019	Honorary Doctorate, University of Johannesburg, South Africa
2019	Raman Chair Professorship, Indian Academy of Sciences, Bangalore, India
2019	Honorary Patronage, University Philosophical Society, Trinity College, University of Dublin, Ireland
2018	Foreign Member, Academy of Sciences of Bologna Institute, Italy
2018	Honorary Doctor, Yerevan State Medical University, Yerevan, Armenia
2018	University Medal, University of Florence, Italy
2018	European Chemistry (EuChemS) Gold Medal
2018	Solvay Chair 2018, Solvay Institutes, Belgium

2018	Honorary Member, Israel Chemical Society
2017	ChemPubSoc Europe Fellow
2017	TUM Ambassador, Technical University Munich, Germany
2017	Honorary Professor, School of Pharmaceutical Sciences, Sun Yat-sen University, Qhuanzhou, China
2017	Gerhard Ertl Lecture Award, Fritz Haber Institute Berlin, Germany
2017	Honorary Professorship, South China Normal University, Qhuanzhou, China
2017	Distinguished Affiliate Professor, Technical University Munich, Germany
2017	RSC Centenary Prize der Royal Society of Chemistry, UK
2017	Academic Society Award, Royal Netherlands Society of Engineers
2017	Tetrahedron Prize
2017	Honorary Professorship, Chinese Academy of Sciences, China
2017	Ereburger City of Groningen und Tynaarlo, Netherlands
2017	Honorary Professorship, East China University of Science and Technology, China
2016	Nobel Prize in Chemistry (jointly with Jean-Pierre Sauvage und Fraser Stoddart)
2016	Honorary Member of the Royal Netherlands Chemical Society
2016	August Wilhelm von Hofmann Medal, German Chemical Society
2015	Chemistry for the Future Solvay Pize, Solvay, Belgium
2015	Arthur C. Cope Late Career Scholars Award, American Chemical Society, Washington, DC, USA
2015	Netherlands Chemistry and Catalysis Award
2015	Diels-Planck Award Lecture, Kiel, Germany
2014	International Organic Chemistry Foundation (IOCF) Yoshida Lectureship Award, Kyoto, Osaka, Japan
2014	Theodor Förster Award, German Chemical Society and Bunsen-Society for Physical Chemistry
2013	Nagoya Gold Medal, Japan
2013	Yamada-Koga Award, Tokyo, Japan
2013	Marie Sklodowska-Curie Medal, Polish Chemical Society, Poland
2013	Lilly European Distinguished Science Award
2013	RSC Award, Royal Society of Chemistry, UK

2013	Dutch Research Council (NWO) gravitation program grant, Netherlands ministry of Science & Education (with E.W. Meijer, R. Nolte)
2012	Grand Prix Scientifique Cino del Duca, French Academy of Sciences
2012	Humboldt Award, Alexander von Humboldt Foundation
2011	RSC Organic Stereochemistry Award, Royal Society of Chemistry, UK
2011	Van ‘t Hoff Medal
since 2010	Member of the Academia Europeae
2009	Van ’t Hoff Award Lecture, Netherlands Academy of Sciences
2009	Chirality Medal, Società Chimica Italiana, Rome, Italy
2008	Paracelsus Award of the Swiss Chemical Society
since 2008	Elected Member of the Netherlands Academy for Technology and Innovation
2008	ERC Research Grant, European Research Council (again 2016)
2008	Knighted by Her Majesty the Queen of the Netherlands
2007	James Flack Norris Award in Physical Organic Chemistry, American Chemical Society, Washington, DC, USA
since 2006	Elected Member of the Royal Netherlands Academy of Sciences
2005	Prelog Gold Medal, (ETH) Zurich, Schwitzerland
2004	Solvias Ligand Contest Award (shared with J. Hartwig), Yale University, Connecticut, USA
2004	Spinoza Award (highest Netherlands scientific award)
since 2004	Foreign Honorary Member of the American Academy of Arts and Sciences, USA
2004	Jacobus H. van‘t Hoff Distinguished Chair in Molecular Sciences, University of Groningen, Netherlands
2003	Koerber European Science Award
2003	Guthikonda Award, Columbia University, New York, USA
2000 - 2001	Novartis Chemistry Lectureship Award
1998	Elected Fellow, Royal Society of Chemistry (RSC), UK
1998	JSPS Fellowship award und JSPS Lecturesahip, Japan Society for the Promotion of Science (JSPS), Japan
1997	Pino Gold Medal, Società Chimica Italiana, Rome, Italy

Major Scientific Priorities

Ben L. Feringa is a chemist. His research focuses on organic chemistry and molecular nanotechnology. He was the first to develop a molecular motor. In 2016 he was awarded the Nobel Prize in Chemistry for "the design and synthesis of molecular machines" together with Jean-Pierre Sauvage and Fraser Stoddart.

Feringa builds tiny molecular switches and motors from organic molecules. Such molecular motors play an important role in nature. In muscle cells, for example, myosin molecules are responsible for muscle contraction.

Feringa developed a light-driven molecular motor based on the light-sensitive molecule rhodopsin. These molecules can directly use light to generate a directional rotor movement. The molecular motor thus becomes controllable and is therefore capable to perform a specific task. Molecular motors can currently rotate up to ten million times per second.

Based on these findings, Ben Feringa constructed the world's first molecular “Nanocar” from molecules. It is only two nanometers in size and uses rotor molecules for propulsion. If the scientists let electrons float above the “Nanocar”, the rotor molecules rotate in one direction and move the vehicle.

There are many conceivable applications for molecular engines and “Nanocars” in the future. They could be used to transport medication to specific targets in the body. Molecules equipped with light switches could then be activated at the target point with a corresponding light wavelength. Light-controlled antibiotics or chemotherapeutic agents could be used selectively and possible side effects therefore avoided. Molecular motors and machines may also be used for the development of new materials, sensors, and energy storage systems.