



## Curriculum Vitae Professor Dr. François Diederich



**Name:** François Diederich

**Born:** 9 July 1952

**Main areas of research: Molecular recognition in chemistry and biology, X-ray structure-based design of nonpeptidic enzyme inhibitors, African sleeping sickness**

François Diederich is an expert in chemical and biological molecular recognition. In a multi-dimensional approach, his research group deciphers and quantifies weak intermolecular interactions such as aromatic-aromatic and dipolar interactions.

### Academic and Professional Career

- 1992 Professor of Organic Chemistry, Swiss Federal Institute of Technology Zurich (ETH), Switzerland
- 1989 - 1992 Professor of Organic and Bioorganic Chemistry, University of California, USA
- 1987 - 1989 Associate Professor, University of California, USA
- 1985 - 1987 Acting Associate Professor, University of California, USA
- 1981 - 1985 Habilitation, University of Heidelberg, Germany
- 1981 - 1985 Research Associate, Max Planck Institute for medical Research, Heidelberg, Germany
- 1979 - 1981 Postdoctoral Fellow, University of California, USA, Otto Hahn Medal, MPG
- 1979 Postdoc, Max Planck Institute for medical Research, Heidelberg, Germany
- 1977 - 1979 Ph.D., University of Heidelberg, Germany
- 1977 - 1979 Ph.D., Max Planck Institute for medical Research, Heidelberg, Germany

- 1976 - 1977    Scholarship of the German Academic Exchange Service
- 1971 - 1977    Studies of Chemistry, University of Heidelberg, German

**Project coordination, Membership in collaborative research projects**

- 2006 - 2010    PRAIRIES, Marie Curie Research Training Network in FP6
- 2001 - 2013    Nanoscale Science Center, Basel, Member and Module Co-leader

**Functions in Scientific Societies and Committees**

- since 2011    Member of the Strategy Board, Hamburg School of Food Science, Germany
- since 2011    Deputy Chairman, Kuratorium of the Fonds of the Chemical Industry, Germany
- since 2011    International Committee on Scientific and Strategic Orientation (COSS), Collège de France
- 2011 - 2012    Vice President, GDCh
- since 2009    GDCh Commission "Perspektiven der Chemie"
- since 2008    Member of the Conseil Supérieur de Recherche et d'Innovation (CSRI) Government of Luxembourg
- since 2008    German Research Board of the Control Group "Pilotstudie Forschungsrating"
- since 2009    Member of the Komitee August Wilhelm von Hofmann Commemorative Coin
- 2008 - 2015    Member of the Board, GDCh
- 2005 - 2007    Chairman of the Vorsitzender der Valuation Group "Chemie für das Forschungsrating des Deutschen Wissenschaftsrates"
- since 2004    Research Board, Kuratorium of the Fonds of the Chemical Industry, Germany
- since 2002    Conseil Scientifique, ISIS, Strasbourg, France
- 1998 - 2008    Member of the Roche Research Foundation Board
- 1998 - 2003    Member of the Kuratorium of the Fonds of the Chemical Industry, Germany
- 1998 - 2006    Member of the Award Komitee, Bayer und Fischer Medals
- 1994 - 2001    Chairman of the New Swiss Chemical Society
- 1994 - 2000    Member of the Conseil Scientifique, Ecole Polytechnique, Palaiseau, France
- 1994 - 2000    Commission member for Further Education, GDCh
- 1994 - 1998    Chairman of the Foundation for Scholarships in the field of Chemistry, Basel, Switzerland

- 1994 - 1996 Research Board Member of the Max Planck Institute for Medical Research, Heidelberg, Germany
- 1992 - 1994 Member of the New Swiss Chemical Society
- 1991 - 1993 Chairman NATO Science Committee on Supramolecular Chemistry

### **Honours and Awarded Memberships**

- 2012 US National Academy of Sciences, Foreign Associate
- 2012 Honorary Doctoral Degree; Technion, Israel
- 2011 Adolf von Baeyer Commemorative Coin, Germany
- 2011 Honorary Membership of the Israel Chemical Society
- 2007 ACS Ronald Breslow Award for Achievement in Biomimetic Chemistry
- 2007 Inhoffen Medal, University of Braunschweig, Germany
- 2006 August Wilhelm von Hofmann Commemorative Coin, Germany
- 2005 Humbolt Research Award
- 2005 Officier, Ordre du mérite, Grand-Duché du Luxembourg
- 2005 Real Academia de Ciencias, Exactas, Físicas y Naturales, Spain; Foreign Member
- 2002 Member of the The Berlin-Brandenburg Academy of Sciences and Humanities, Germany
- 2000 Janssen Prize for Creativity in Synthesis
- 2000 Havinga Medal, University of Leiden, Germany
- 1999 Foreign Honorary Member, American Academy of Arts and Sciences
- 1998 Member of the German National Academy of Sciences Leopoldina
- 1995 Sammet Foundation Guest Professorsip, University of Frankfurt, Germany
- 1994 August Wilhelm von Hofmann Lecture, Germany
- 1993 Otto Bayer Award in Chemistry
- 1992 ACS Arthur C. Cope Scholar Award
- 1990 McCoy Research Award, UCLA
- 1990 Fellow, American Association for the Advancement of Science
- 1989 Glen T. Seaborg Research Award, UCLA
- 1987 - 1991 Camille and Henry Dreyfus Teacher-Scholar Award

1986	Merck Sharp & Dohme Career Development Award
1986	Dupont Young Faculty Award, UCLA
1979	Otto Hahn Medal of the Max Planck Society

### Major Scientific Interests

François Diederich is an expert in chemical and biological molecular recognition. In a multi-dimensional approach, his research group deciphers and quantifies weak intermolecular interactions such as aromatic-aromatic and dipolar interactions. The gained insight benefits the structure-based development of nonpeptidic enzyme inhibitors that is pursued in his group, in particular targeting new therapeutic leads against tropical diseases.

Another focus of his research are supramolecular nanosystems, such as switchable receptors, and nano-structured surfaces with guest-hosting properties. François Diederich is a leading scientist in carbon-rich materials, such as fullerenes and acetylenic networks. His work is highly synthesis-driven and characterized by a blend of advanced physical-organic analysis, involving numerous international collaborations.

Research in the Diederich group is structured around four central themes:

Molecular recognition in chemistry and biology;

Modern medicinal chemistry: molecular recognition studies with biological receptors and X-ray structure-based design of nonpeptidic enzyme inhibitors, with a strong focus on novel anti-malarials and medicines against African sleeping sickness

Supramolecular nanosystems and nano-patterned surfaces

Advanced materials based on carbon-rich acetylenic molecular architecture: new organic super-acceptors and their inter- and intramolecular charge-transfer complexes, opto-electronic materials for molecular electronic circuitry, chiral macrocyclic and acyclic allenacetylenes, amplification of chirality and transfer of molecular to macroscopic chirality

Work in these areas is highly synthesis-driven and characterized by a blend of advanced synthetic and physical-organic methodology. Many projects are undertaken in international collaborations.