

**Family Name:** De Feyter

**Title:** Full Professor

**Nationality:** Belgium

**First Name:** Steven

**Gender:** M

**Date of Birth:** 25 April 1971

**Organisation:** KU Leuven, Department of Chemistry, Celestijnenlaan 200 F, B-3001 Heverlee (Leuven), Belgium, Direct tel.: +32 16 327921, E-mail: [steven.defeyter@kuleuven.be](mailto:steven.defeyter@kuleuven.be), website: [www.defeytergroup.org](http://www.defeytergroup.org)

### Academic experience

11/2016	Visiting professor at Osaka University
08/2012-07/2016	Chair of the Department of Chemistry
09/2011-now	Full Professor: KU Leuven
10/2008-09/2011	Professor: KU Leuven
10/2005-09/2008	Senior Lecturer (equivalent to Associate Professor in US): KU Leuven
10/1998-09/2005	Postdoctoral research fellow of the Fund of Scientific Research – Flanders at the KU Leuven
03/1998-06/1999	Postdoctoral research fellow and Fulbright fellow at (Caltech, A. Zewail)
01/1998-03/1998	Postdoctoral research fellow of the KU Leuven
1993-1997	Ph.D. in Chemistry at KU Leuven (promotor: Frans C. De Schryver)

**Memberships of Academic Societies:** American Chemical Society, American Physical Society, Materials Research Society, Fellow of the Royal Society of Chemistry, Elected member of the Royal Flemish Academy of Belgium for Science and the Arts: Natural Sciences (since 2014), Elected member of European Academy of Sciences (since 2018)

### Teaching Experience

Principles of Chemistry	1st bachelor year in bioengineering (KU Leuven)
Organic Chemistry	1st bachelor year in bioengineering (KU Leuven)
Chemistry at Nanometre Scale	Master in Nanoscience and Nanotechnology (KU Leuven)
"Molecular Self-Assembly"	guest lecturer at several institutes

### Editor:

Associate Editor of "Chemical Communications" (Impact factor: 6.3) (since March 2010).

### Invited talks

In the last 10 years, I have delivered some 60 invited lectures, including *keynote* and *plenary* lectures, at international conferences and I have given an equivalent number of colloquia at various universities and institutes.

### Publications:

My publication list contains more than 330 entries in international, peer-refereed journals, including publications in Nature Chemistry, Angew.Chem., Nano Lett., ACS Nano, J.Am.Chem.Soc., etc.

More than 330 published articles have received more than 11700 citations without self-citations (h-index: 61) (Web of Science Dec. 2018)

**Supervision 2008 - 2018:** I have supervised 15 PhD students (completed PhD)

### **Selection of 5 invited/keynote/plenary presentations (last 5 years)**

- 1) "Nanopatterning at the liquid/solid interface via molecular self-assembly: from fundamentals to applications", Foundations of Nanoscience (FNANO2013), Snowbird, Utah, USA, April 26, 2013
- 2) "Nanopatterning of graphite and graphene at the liquid/solid interface via molecular self-assembly: from fundamentals to applications", ACS meeting, Dallas, USA, March 16-20, 2014
- 3) "Molecular self-assembly on graphene and graphite: from fundamentals to applications", IAS Focused Program on Advanced Microscopy and Spectroscopy of Supramolecular and Macromolecular Systems on Surfaces, Hong Kong, December 12–15, 2016
- 4) "Functionalization of 2D materials: a molecular approach", Elecmol 2018 "9th International Conference on Molecular Electronics", Paris, France, December 17-20, 2018;
- 5) "Controlling chirality at the liquid-solid interface", Solvay conference: Chiral Symmetry Breaking at Molecular Level, Brussels, Belgium, November 28-30, 2018

### **Organisation of International conferences (selection)**

- 1) Conference on "Chirality at the Nanoscale", November 3 – 6, 2015, Leuven (Belgium), organizer (90 participants)
- 2) Conference on "Scanning Probe Frontiers in Molecular 2D-Architecture World" as part of the E-MRS meeting, June 18 – 22, 2017, Strasbourg (France) co-organizer (100 participants)
- 3) Conference on "Scanning Probe Microscopy on Soft and Polymeric Materials" SPMonSPM 2018, August 20 – 24, 2018, Leuven (Belgium), organizer (160 participants)

### **Awards**

European Research Council (ERC) Advanced Grant (2013); Elected member of the Royal Flemish Academy of Belgium for Science and the Arts: Natural Sciences (2014); 26th IOCF Yoshida Lectureship (2016); Elected member of the "European Academy of Sciences" (2018)

### **Research interests of relevance for the project.**

Molecular self-assembly on surfaces is a central theme of my research, with a focus on the relation between structure and function. Recent research activities cover a broad range of topics such as two-dimensional crystal engineering, templating, dynamics and reactivity. These studies aim at bringing insight in the fundamental aspects of molecular organisation on surfaces, as well as the formation and use of these nanostructured functional surfaces, including 2D materials. The liquid-solid interface is a preferred environment to induce self-assembly. Also biomolecular systems (DNA, proteins, their complexes, etc.) are investigated, with a focus on those that are involved in disease related processes. Scanning probe microscopy and spectroscopy techniques are particularly useful to probe the structural, dynamic, and electronic properties of these surface-confined molecular systems.