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Full Professor at Université of Toulouse
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CURRENT RESEARCH PROJECTS

Keywords : Polyaromatics - Nanovehicles - Double decker complexes - tripodal ligands - Molecular rotors and motors - Molecular gears - Technomimetic molecules

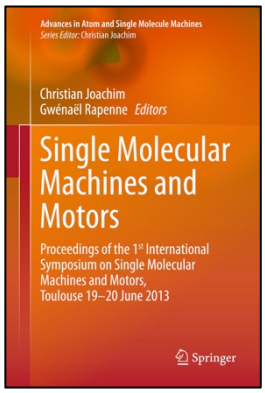
Design and synthesis of molecular machines for their study and manipulation at the single molecular scale to grants access to the mechanical properties at the molecular level. These molecules are designed to operate as single molecules on surfaces under the control of the STM tip

ACADEMIC POSITIONS & EDUCATION

Since 2015 :	Full Professor (1st class), University of Toulouse, France
2011-2015 :	Full Professor (2nd class), University of Toulouse, France
2006-2011 :	Associate Professor, University of Toulouse, France
2006 :	Habilitation
2000-2005 :	Assistant Professor, University of Toulouse, France
1998-1999 :	Research Associate, ETH Zürich, supervised by Prof. F. Diederich
1998 :	Ph.D. in Molecular Chemistry, University Louis Pasteur, Strasbourg, supervised by Prof. J.P. Sauvage
1994 :	M.Sc., Louis Pasteur University, Strasbourg, France (1st / 97)
1992 :	B.Sc., Louis Pasteur University, Strasbourg, France (2nd / 121)

BIBLIOMETRICS (May 2016)

H-index: 26
Number of citations: >1550
Research and review articles: 63
Co-editor with C. Joachim of *"Single Molecular Machines and Motors"*, Springer, 11 chapters, ISBN: 978-3-319-13871-8, 2015.
Book chapters: 6
Proceedings: 12



SCIENTIFIC DIRECTION

8 Ph.D. students, 6 post-docs, 9 M2 students, 16 exchange students (USA, UK and Japan) and 14 M1 students

INVITED CONFERENCES AND LECTURES (87)

20 international invited conferences, 14 selected contributed lecture at international symposiums/congres, 55 invited confs in universities and national meetings
Organization of 5 international symposia

RESEARCH GRANTS in the last 5 years

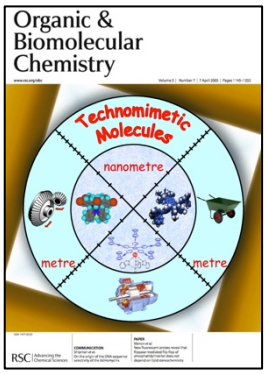
- ANR: 3 (2 as coordinator, 950 k€)
- UE : 1 (370 k€)
- Research programs from Universities: 1 from Japan (620 k€), 1 from France (110 k€)
- PhD grants (CNRS-Région): 1 (120 k€)

Total : 7 projects for a total of 1 550 k€

PRIZES, DISTINCTIONS AND INVITED POSITIONS

Laureate of a **Lavoisier** fellowship from the Ministry of Foreign Affairs (1998)
Prize of scientific excellence, Ministry of Research (2006-2009, 2010-2013 and 2014-2017)
Invited Professor at the University of Florida, Gainesville, USA (Summer 2006), University of Saitama, Japan (January 2011), University of Maracaibo, Venezuela (May 2012), NAIST, Japan (2016-2017)

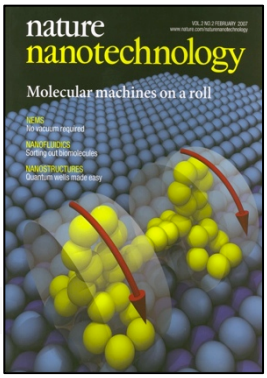
MAJOR PUBLICATIONS



[1] ***Synthesis of technomimetic molecules : Towards rotation control in single molecular machines and motors*** G. Rapenne, *Org. Biomol. Chem.* **2005**, *3*, 1165-1169. (with cover) First introduction of the concept of technomimetic molecules (57 citations)

[2] ***Rolling a single molecular wheel at the atomic scale*** L. Grill, K. H. Rieder, F. Moresco, G. Rapenne, S. Stojkovic, X. Bouju, C. Joachim, *Nature Nanotech.* **2007**, *2*, 95-98. First controlled rotation of a wheel dimer on a surface (107 citations)

Highly Cited Paper



[3] ***Prototypes of molecular motors based on star-shaped organometallic ruthenium complexes*** G. Vives, H.P. Jacquot, A. Carella, J.P. Launay, G. Rapenne, *Chem. Soc. Rev.* **2009**, 38, 1551-1561. Revue sur les moteurs développés au CEMES (47 citations)

[4] ***Controlled clockwise and anticlockwise rotational switching of a molecular motor*** U.G.E. Perera, F. Ample, H. Kersell, Y. Zhang, J. Echeverria, M. Grisolia, G. Vives, G. Rapenne, C. Joachim, S.-W. Hla, *Nature Nanotech.* **2013**, *8*, 46-51. First molecular motor with high unidirectionality and full reversibility (76 citations)

Highly Cited Paper

[5] ***Molecule concept-nanocars : chassis, wheels and motors ?*** C. Joachim, G. Rapenne, *ACS Nano*, **2013**, *7*, 11-14.

[6] ***Scorpionate hydrotris(indazolyl)borate ligands as tripodal platform for surface-mounted molecular motors and gears*** C. Kammerer, G. Rapenne, *Eur. J. Inorg. Chem.* **2016**, 2214-2226.

[7] ***Simultaneous and coordinated rotational switching of all Molecular rotors in a network*** Y. Zhang, H. Kersell, R. Stefak, J. Echeverria, V. Iancu, G. Perera, Y. Li, A. Deshpande, K.-F. Braun, C. Joachim, G. Rapenne, S.-W. Hla, *Nature Nanotech.* **2016**, *in press*. First molecular rotor with a collective rotation in a network