



Pr. Rachel MEALLET-RENAULT

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<http://www.ismo.u-psud.fr/spip.php?rubrique311> - <http://www.researcherid.com/rid/I-6224-2015>



born on 22/09/1972, Tulle, France - Married, 3 children

Professional Experience

Since sept. 2014 : Full Professor (in physical chemistry) @ISMO UMR8214 Univ. Paris-Sud

2011-2014 : Associate Professor @Lab. de Photophysique et photochimie supra- et macromoléculaires PPSM UMR8531 ENS de Cachan.

2005-2011: "Professeur agrégé" Département de chimie ENS Cachan – associated researcher @PPSM UMR8531

2005-2006: CNRS researcher @Institut Lavoisier UMR 8180 Université de Versailles-St Quentin.

1997-2005: "Professeur agrégé" Département de chimie ENS Cachan – associated researcher @PPSM UMR8531

Education

2008: HDR - Habilitation to conduct research - Université Paris Sud

1996-2000: PhD, PPSM UMR8531 ENS de Cachan

1996: Master in physical-chemistry - Université Paris Sud

1995: Agrégation Sciences-Physiques option chimie (Nationwide competitive teaching examination in chemistry)

1992-1994 : Graduation in chemistry – Université de Limoges

Academic activities

Since May 2016: Member of the Chemistry Research Department Board (<https://www.universite-paris-saclay.fr/en/research/departments>) and of the School of Basic Sciences Board of Paris-Saclay university (<https://www.universite-paris-saclay.fr/en/education/schools>)

Since Jan. 2016: Director of the master Degree in Chemistry of Paris-Saclay university (6 M1 - 13 M2)- member of Ile de France French Chemical Society Board.

Since Jan.2015: Member of "Fédération de Chimie-Physique de Paris-Saclay" Executive Committee

Sept. 2007-Aug. 2014 : Deputy-Director of the chemistry Teaching Department, ENS Cachan

Sept. 2011 - Aug. 2014 : co-supervisor of "Magistère Physico-Chimie Moléculaire" (ENSC-Upsud)

Oct. 2009 - Aug. 2014 : elected member of the Board of Directors ENS Cachan

Dec. 2011- Aug. 2014 : Disability Project Leader (chargée de mission Handicap) – ENS de Cachan

Research Activities

56 publications (h-index 25 - nb citations 1407 dont 1299 without self-citation) – 1 brevet – 1 chap.

I am particularly interested in the design and characterization of (nano) fluorescent materials to develop new probes for multi-modal imaging. My main area of expertise is physical chemistry. I'm an expert in photophysics and fluorescence imaging. I currently develop 3 research topics: (1) spectroscopic studies of hindered fluorophores (BODIPY) for solid state emission - (2) development of nanometric assemblies (polymers) for bioimaging - (3) development of sensitive surfaces for Biology or energy applications. As a physical-chemist, I was solicited to be a member of IUPAC Project # 2013-040-1-300 "Measurement of Photoluminescence Quantum Yields". Since my arrival @ Université Paris Sud I have obtained funding from the Ile-de-France region (DIM NanoK 2015-2016), labex Charmmmat (Post-doc 2015-2016), the Lumière Matière Light Federation FR2764 (In 2015 and 2016), Labex LASips (2017-2018), Gefluc 2017 and strong support from CNRS and my host laboratory. A PhD grant from the ED "Chemical sciences: molecules, materials, instrumentation and biosystems" has been awarded to me (PhD Gabriela Moran Cruz 2016-2019). I also co-lead two thesis (CSC Y. Tian Fellowship 2014-2018 - Vietnam Scholarship T. Thu Trang 2016-2019). I have supervised 7 PhD students, 11 Master M2 students and 1 post-doctoral fellow. I have given 11 invited talks (4 international). I have been invited to be a reviewer or examiner at 25 PhD defenses. I belong to expert and evaluation committees for research : FWO (Fonds Wetenschappelijk Onderzoek - Vlaanderen Fondation de recherche en Flandres - Belgium 2016) - Université de Toulouse : AAP Emergence 2015 - ANR internationales 2015.

Publications

« Tuning BODIPY molecular rotors into the red: sensitivity to viscosity vs. temperature », T.T. Vu, R. Méallet-Renault, G. Clavier, B.A. Trofimov, M. Kuimova* *J. Mater. Chem. C*, **2016**, 4(14), 2828

« Rapid and accurate detection of Escherichia coli growth by fluorescent pH-sensitive organic nanoparticles for High-throughput screening applications», Y. Si, C. Grazon, G. Clavier, J. Rieger, J.-F. Audibert, B. Sclavi*, R. Méallet-Renault*, *Biosens. and Bioelect.* **2016**, vol.75, 320

« Ultrabright BODIPY-tagged Polystyrene Nanoparticles: Study of Concentration Effect on Photophysical Properties », C. Grazon, J. Rieger, B. Charleux, G. Clavier*, R. Méallet-Renault*, *J. Phys. Chem. C* **2014**, 118(25), 13945

« A spiral designed surface based on amino-perylene grafted polyacrylic acid », E. Celia, S. Amigoni, E. Taffin de Givenchy, G. Pieters, A. Gaucher*, D. Prim, J.-F. Audibert, R. Méallet-Renault*, R.B. Pansu, F.Guittard*, *Chem. Comm.* **2014**, 118, 50, 12034

« Understanding the spectroscopic properties and aggregation process of a new emitting Boron Dipyrromethene (BODIPY) » T.-T. Vu*, M. Dvorko, E.Y. Schmidt, J.-F. Audibert, P. Retailleau, B.A. Trofimov, R.B. Pansu, G. Clavier, R. Méallet-Renault* *J. Phys. Chem. C* **2013**, 117, 5373

Teaching Activities (over 210 hours a year)

I teach from L1 to M2, in mineral, general and chemistry-physical chemistry. To my opinion experimental practice is very important, that's why I design new practical courses almost every year (nano-chemistry, photophysics). I am interested in chemistry at the origins of life, I develop courses at the interface with biology. I have participated in the writing of education books (3). I do pay attention to teachers life-long training and to the link between high school and university. I contribute to popularization and communication actions (actions towards a young public in a situation of disability).