

# Renaud NICOLAÏ

Professor ESPCI Paris

## Professional Experience

- 2019 – to date **Group Leader** of the “*Chemistry and Macromolecular Engineering*” team at ESPCI Paris
- 2018 – to date **Full Professor** at ESPCI Paris – PSL
- 2016 **Habilitation to Direct Research**, Pierre et Marie Curie University, Paris, France  
*Polymeric Systems Relying on Reversible and Dynamic Covalent Chemistry*  
Committee: S. Armes, H. Cramail, D. Gigmes, D. Hourdet, J-F. Lutz, L. Leibler, K. Matyjaszewski
- 2010 – 2017 **Assistant/Associate Professor** at ESPCI Paris – PSL
- 2010 **Postdoctoral Researcher** in the group of Prof. Bert (E.W.) Meijer, TU/e, The Netherlands

## Education

- 12/2009 **PhD in Chemistry with Prof. K. Matyjaszewski**, Chemistry Department, Carnegie Mellon University, Pittsburgh, PA, USA  
*Enhancing control of macromolecular architecture by synergistic combination of atom transfer radical polymerization, nitroxide mediated polymerization and reversible addition-fragmentation chain transfer polymerization*  
Defense committee: D. Curran, K. Matyjaszewski, L. Walker, N. Washburn
- 10/2008 **PhD in Chemistry and Physical Chemistry of Polymers with Prof. P. Hémerly**, Pierre et Marie Curie University, Paris, France  
*Polymérisation Radicalaire Contrôlée: Application à la Synthèse d'Architectures Macromoléculaires*  
Defense committee: B. Charleux, A. Deffieux, P. Hémerly, L. Marx, K. Matyjaszewski, J. Penelle
- 2004 **Master's degree in Chemistry and Physical Chemistry of Polymers**. Pierre et Marie Curie University, Paris, France. Ranked first of the Chemistry Major.
- 2003 **Master's degree in Chemistry and Chemical Engineering**. Ecole Supérieure de Chimie Organique et Minérale (ESCOM), Cergy-Pontoise, France.

## Teaching Activities and Responsibilities

- 2021 – to date In charge, with Y. Tran, of the **Dynamic and Reconfigurable Polymers and Soft Materials course** of the Integrative Chemistry and Innovation Master of PSL University, Paris (48 hours/year)
- 2018 – to date In charge, with A. Guérinot, of the **Organic Chemistry course** to first year students - ESPCI Paris (21 hours/year)
- 2016 – to date In charge of the **Polymer Chemistry and Applications course** to third year students - ESPCI Paris (15 hours/year)
- 2013 – to date In charge of the **Polymer Chemistry course** to first year students - ESPCI Paris (16 hours/year)
- 2019 – 2020 **Organic Chemistry laboratory course** (70 hours/year) to first year students - ESPCI Paris
- 2014 – 2018 Seminar for the Master 1 of the "École Normale Supérieure" "Polymers chemistry and physical-chemistry"
- 2014 – 2019 ATHENS European week. Lecture on polymer chemistry
- 2011 – 2019 **Inorganic Chemistry and Materials laboratory course** (135 hours/year) and tutorials (20 hours/year) to second year students - ESPCI Paris
- 2012 – 2014 **Soft Matter tutorials** (15 hours/year) to third year students - ESPCI Paris
- 2006 – 2007 **Teaching Assistant**, organic chemistry laboratory course, Carnegie Mellon University
- 2005 – 2006 **Teaching Assistant**, Pierre et Marie Curie University

## Research Areas

- Development of synthetic methodologies for macromolecular engineering: thio-polymers, branched polymers, molecular brushes, cyclics, multiblock copolymers, controlled radical polymerization ...
- Development of dynamic covalent reactions
- Vitrimers, responsive and/or self-healing materials
- Rheology modifiers and responsive formulations
- Reactive processing and polymer recycling

## Supervision of Graduate Students and Postdoctoral Fellows

Supervised or co-supervised 17 Ph.D. students (10 graduated ; 7 ongoing) and 17 postdoctoral researchers

## Scientific Production

- 42 publications in peer-reviewed journals (4777 citations, h-index = 30)  
<https://scholar.google.com/citations?user=KAB-QKoAAAAJ&hl=fr&oi=ao>
- 21 patents
- Since appointed at ESPCI Paris:
  - 27 invited oral presentations at international conferences
  - 6 contributed oral presentations at international conferences
  - 20 invited seminars or workshop lectures in French or international universities/research institutes

## Organization of Scientific Meetings

- Co-organizer of a work of the "**Groupe Français d'Études et d'Applications des Polymères**" (GFP) on **vitrimers 12/2017**, ENSAM, Paris, France (around 100 attendees).
- Co-organizer of **PC-Focus**, a one-day event dedicated to all members of ESPCI Paris with presentations from researchers, staff, PhD students and students from ESPCI Paris (**02/2017**; **02/2018**; **02/2019**; around 250 attendees at each edition).
- Co-organizer of the symposium "**Advance in Functional Polymers with Sophisticated Branched Structures**" that took place in August **2016** during the **252<sup>th</sup> ACS National Meeting** in Philadelphia, PA, USA.
- Co-organizer of the **ESPCI Soft Matter Days**, a two-day event with oral and poster presentations covering research conducted on **Soft Matter at ESPCI Paris** (first edition: **07/2015**; second edition: **06/2017**; around 120 attendees at each edition).

## Honors and Awards

2018-2022	Laureate of the Paris Emergences Program
<a href="#">2017</a> and <a href="#">2019</a>	Invited to contribute to the "Pioneering Investigators" issue of Polymer Chemistry
2017, 2020, 2021	"Accueil en délégation" at CNRS
2014-2017	Excellence award from ESPCI Paris
2014	<a href="#">CNRS Bronze Medal</a>
2012	Prix Jean Langlois de Diffusion de la Recherche, Fondation Langlois
2009	Astrid and Bruce McWilliams Fellowship, Carnegie Mellon University
2009	Excellence in Graduate Polymer Research, American Chemical Society
2008	John & Nancy Harrison Legacy Graduate Fellowship, finalist, Carnegie Mellon Univ.