



Camille Brigodiot

PhD candidate in physical-chemistry and microfluidics
Chemical engineer

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Permis B, 09/05/1998, French and Mexican

Education

Sorbonne University

PhD degree - Doctoral School of Chemistry and Physics of Paris

Rueil-Malmaison, France

Nov 2022 – Ongoing

- MOOC on Open Science, formation on ethics in scientific research

PSL University - Institut Pierre Gilles de Gennes (IPGG)

Research Master in Science and Material Engineering - Microfluidics

Paris, France

Sept 2021 – June 2022

- Co-accredited degree from Chimie Paris PSL, ESPCI Paris PSL and Mines Paris PSL
- Main subjects: soft matter, microfabrication, hydrodynamics, surface functionalization, rheology, biophysics

Ecole Nationale Supérieure de Chimie de Paris - Chimie ParisTech - ENSCP - PSL University

Chemical engineer degree - Master grade

Paris, France

Sept 2019 – June 2022

- Soft matter classes at ESPCI Paris - PSL (1 semester)

Lycée Fénelon

Preparatory classes for engineering Grandes Ecoles - Physical-Chemistry (PC)*

Paris, France

Sept 2016 – July 2019

Professional Experiences

IFP Energies nouvelles - PhD thesis

Department of physical-chemistry of interfaces and complex fluids

Rueil-Malmaison, France

Nov 2022 - Ongoing

- Study of dynamic interfacial properties with a microfluidic tensiometer
 - Experimental optimisation of a microfluidic tool for studying surfactant adsorption at very short times
 - Theoretical study of surfactant adsorption
 - Numerical resolution using Python and Matlab
- Université Libre de Bruxelles (ULB - TIPs, Belgium): research visitor (2 months) to work on the RayDrop microfluidic system with Pr. Benoit Scheid
- Wageningen University and Research (WUR, The Netherlands): research visitor (3 months) to perform experiment with the EDGE tensiometer with Dr. Boxin Deng and Pr. Karin Schroën

IFP Energies nouvelles - End-of-studies internship

Department of experimental physics and porous media

Research Institute of Chemistry of Paris (IRCP) - Groupe 2PM

Rueil-Malmaison, France

Feb 2022 – August 2022

- Production of two-dimensional porous media (micromodels) with heterogeneous wettability: surface treatments (plasma and liquid), clean room microfabrication

Ecole Normale Supérieure (ENS PSL) - Research internship

Department of physics

Paris, France

Nov 2021 – Jan 2022

- Study and optimisation of an innovative process for treating micropollutants in water

Uppsala University - Research internship

Department of Physical-chemistry - Peafowl Solar Power

Uppsala, Sweden

May 2021 – August 2021

- Design and optimisation of transparent solar cells

Gattefossée SAS

- Work placement in a chemical/cosmetics industry

Saint-Priest, France

June 2020 – July 2020

Technical skills

Experimental techniques

- Tensiometry: Tracker (Teclis Instruments), Wilhelmy plate, Spinning drop
- Surface functionalisation: PECVD with atmospheric plasma, liquid route
- Surface characterisation: contact angle, FTIR, AFM, notions of MEB/EDS and optical profilometry
- Microfabrication: microfluidic chips in PDMS, COC
- Trained in pressure and temperature equipment

Languages

French (native speaker), English (TOEIC: 985/990, C1), Spanish

Softwares

ImageJ, Plugim!, Matlab, Python, Office Pack, LaTeX

Main conferences

- [1] **Camille Brigodiot**, Boxin Deng, Marie Marsiglia, Karin Schroën, Christine Dalmazzone and Annie Colin. (June 2025) **Nonionic surfactants at the oil/water interface: short-time dynamic behavior observed with a microfluidic tensiometer.**
99th ACS Colloids & Surface Science Symp & 18th IACIS Conference - Edmonton, Canada. *Oral presentation*
- [2] **Camille Brigodiot**, Boxin Deng, Marie Marsiglia, Karin Schroën, Christine Dalmazzone and Annie Colin. (April 2025) **Short-time dynamic interfacial tension measurements using microfluidics.**
Encaps Days - Secoya Technologies, Louvain-La-Neuve, Belgium. *Oral presentation - Invitation*
- [3] **Camille Brigodiot**, Boxin Deng, Marie Marsiglia, Karin Schroën, Christine Dalmazzone and Annie Colin. (Nov 2024) **Study of dynamic interfacial properties with a microfluidic tensiometer.**
Plenary days of the GDR MicroNanoFluidique, Nice, France. *Oral presentation*
- [4] **Camille Brigodiot**, Boxin Deng, Marie Marsiglia, Karin Schroën, Christine Dalmazzone and Annie Colin. (Oct 2024) **Study of dynamic interfacial properties with a microfluidic tensiometer.**
Hitchiker's Guide to Rheology, Webinar. *Oral presentation - Invitation*
- [5] **Camille Brigodiot**, Boxin Deng, Marie Marsiglia, Karin Schroën, Christine Dalmazzone and Annie Colin. (Sept 2024) **Study of dynamic interfacial properties with a microfluidic tensiometer: the partitioned-EDGE device.**
Conference of European Colloids and Interface Science, Copenhagen, Denmark. *Oral presentation*

Publications

- [1] **Camille Brigodiot**, Boxin Deng, Karin Schroën, Marie Marsiglia, Christine Dalmazzone and Annie Colin. **Studying surfactant mass transport through dynamic interfacial tension measurements: A review of the models, experiments, and the contribution of microfluidics.** Published (Jan 2024) in *Advances in Colloid and Interface Science*. [10.1016/ACIS.2024.103239](https://doi.org/10.1016/ACIS.2024.103239) [↗](#)
- [2] **Camille Brigodiot**, Elliot Speirs, Cédric Guyon, Michaël Tatoulian and Nicolas Pannacci. **Fabrication of COC micromodels with wettability heterogeneities: method and influence on fluid transport.** Published (March 2025) dans *Soft Matter*. [Soft Matter, 2025,21, 2509-2517](https://doi.org/10.1039/D5SM00017A) [↗](#)

Associative commitments

Doctoral School (ED 388) - Physical Chemistry and Analytical Chemistry of Paris Centre

Jan 2023 - Jan 2025

- Doctoral student representative
- Participation in doctoral school's councils

Association of doctoral students and former doctoral students of IFP Energies nouvelles (ADIFP)

Nov 2022

- Vice-Treasurer (Sep 2023 - Sep 2024), member since Nov 2022
- Organisation of doctoral student days and the company forum for the 2023 and 2024 editions

Student Board of Chimie ParisTech-PSL

Feb 2021 - Jan 2022

- Third-year student representative

French Chemists Tournament

March 2021

- First prize won by the Chimie ParisTech - PSL team

- Best speaker award

Forum Horizon Chimie

March 2020 - Feb 2021

- Member of the association board, logistics manager

Tutoring - Secondary school/High school

2020 - 2022

- Private lessons in physics, chemistry, mathematics, homework help

Other interests

- Amateur brass band: trumpet player for 5 years
- Horse-riding: 15 years' experience, including 5 years in eventing competition (UCPA Vincennes) with 4 participations in the French Equestrian Championships (1 gold medal in the team event and a bronze medal in the individual event).
- Amateure choir
- Ballet: practised regularly for 10 years, then resumed after a 15-year break.
- Hiking, mountain climbing and mountaineering