Dr. Samy M. Aïssiou

Post-doctoral research assistant

CP2M Laboratory, Université de Lyon, Villeurbanne

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Profile

I am a highly motivated and hard-working organometallic chemist, looking for research experience abroad. I am especially drawn to challenging, fundamental problems of chemistry. My core expertise is air-sensitive synthesis, and in-depth characterization of molecular and supported species. I am also trained in the field of heterogeneous catalysis, with reagents in gas or liquid phase.

Education

2021-2024: Doctoral student, Organometallic Chemistry and Heterogeneous Catalysis, Université de Lille, France

Laboratoire de Catalyse et de Chimie du Solide (UCCS laboratory)

Supervisors: Prof. Mathieu Sauthier et Dr. Nicolas Merle

- Horizon 2020, "TAKE-OFF" project : "Sustainable aviation fuel from CO_2 and H_2"
- Thesis title: "Well-defined, nickel-based oligomerization catalysts obtained by surface organometallic chemistry."

2017-2020: MSc, Green Chemistry, Université Toulouse 3 Paul Sabatier.

2013-2017: BSc, Molecular Chemistry, Université Toulouse Paul Sabatier.

Research experience

Since October 2025: Postdoctoral research assistant, CP2M Laboratory, Villeurbanne, Lyon metropolitan area, France.
Team M^2AGIC^2, under the supervision of Dr. Clément Camp and Dr. Chloé Thieuleux

Subject : ***Design of heterogeneous catalysts for C-H and C-F bond activation, particularly hydrodefluorination and methane-ammonia reforming.***

July to December 2024: Postdoctoral research assistant, UCCS lab, Villeneuve-d'Ascq, Lille metropolitan area, France.
under the supervision of Dr. Nicolas Merle and Pr. Mathieu Sauthier

Subject : (project "TAKE-OFF") **Synthesis, characterization and utilization of aluminium-nickel based catalyst for batch ethylene oligomerization.**

2021-2024: Doctoral student, 3 years, UCCS lab, Villeneuve-d'Ascq, Lille metropolitan area, France.
Supervision : Dr. Nicolas Merle, Prof. Mathieu Sauthier

2020: 6-month internship, Laboratoire de Chimie de Coordination, Toulouse. *Supervisor : Dr. Olivier Baslé*
Direct carboxylation of aliphatic C-H bonds using photocatalysis

2019: 3-month internship, Laboratoire de Chimie de Coordination, Toulouse. *Supervisor : Dr. Jean-Pascal Sutter*
Synthesis of lanthanide-based complexes for the study of their magnetic properties

2018: 2-month internship, Laboratoire SOFTMAT, Toulouse. *Supervisor : Dr. Christophe Coudret*
Hydrothermal synthesis of upconverting lanthanide-based luminescent nanoparticles

Teaching experience

2021 - 2023: Monitoring and evaluation for practical sessions of organic chemistry, 80 hours.

National School of Chemical Sciences (ENSCL) – Centrale Lille, Lille, France.

Publications in peer-reviewed journals

- Aïssiou, S. M.; Isah, A. A.; Al Takach, S.; Bravo, C.; Tayeb, K. B.; Capet, F.; Revel, B.; Zinck, P.; Sauthier, M.; Rigoulet, M.; Merle, N. Back to the Future: **New Insights into the Activation of Supported π-Allyl Nickel Complexes for Olefin Oligomerization and Diene Polymerization.** *Catal. Sci. Technol.* **2026**, *16* (17), 5669–5682. https://doi.org/10.1039/d6cy00789a
- Wu, J.; Dubrawski, Z.; Wu, S.; Aïssiou, S.; Fang, L.; Veyre, L.; Thieuleux, C.; Li, T.; Camp, C.; Xiang, Y. **Heterobimetallic Iridium-Niobia Catalyst for Efficient and Selective Methane Ammonia Reforming**. *J. Am. Chem. Soc.* **2026**, *148* (27), 28507–28517. https://doi.org/10.1021/jacs.6c04917
- Aïssiou, S. M.; Isah, A. A.; Rigoulet, M.; Tougerti, A.; Cristol, S.; Ben Tayeb, K.; Revel, B.; Doumert, B.; Sauthier, M.; Merle, N. "**Well-Defined Silica-Supported Nickel-Alkyl Complexes for Ethylene Oligomerization: Crucial Role of Halogenated Lewis Acid.**" *Organometallics* **2026**, *45 (7): 766–779.* https://doi.org/10.1021/acs.organomet.5c00428
- Dubrawski, Z.; Aïssiou, S.; Jeanneau, E.; Thieuleux, C.; Camp, C. "**Visible-Light Driven H_2 Reductive Elimination Unlocks Reactivity in Polyhydrido Niobium Iridium Clusters.**" *Dalton Trans.* **2026**, *55* (2), 620–629. https://doi.org/10.1039/D5DT02432C

Other publications

- Moser, P.; Stahl, K.; Schmidt, S.; Stan, G.; Zubeir, L.; Van Der Veek, M.; Könemann, J.-W.; Khodakov, A.; Sauthier, M.; Merle, N.; Ordomsky, V.; Corda, M.; Aissiou, S.; Abdulrahman, I.; Birkved, M.; Khoshnevisan, B.; Marami, H.; Weirich, T.; Causevic, D.; Arai, H.; Ishikawa, T.; Van Mastbergen, E.; De Hoop, D.; Konosidou, N.; Döntgen, M.; Mally, M.; La Mantia, A.; Tottolo, L. "**From CO_2 and H_2 to Sustainable Aviation Fuel – TAKE-OFF**". *SSRN Electron. J.* **2024**. https://doi.org/10.2139/ssrn.5016154

Conferences

2nd edition of the French-Italian Coordination Chemistry Days, 2026, Turin, Italy

- Oral communication: *Bimetallic molybdenum iridium catalysts for hydrodefluorination obtained from surface organometallic chemistry*

EUROPACAT 2023, Prague, Czech Republic

- Poster presentation: *Surface nickel complexes as models for heterogeneous oligomerization catalysts*

Congrès de la Société Chimie de France, 2023, Nantes, France

- Poster presentation: *Surface nickel complexes as models for heterogeneous oligomerization catalysts*

Journéees Nord-Ouest-Europe ennes des Jeunes Chercheurs, 2022, Caen, France

- Oral communication: *Nickel-based supported catalysts for the oligomerization of light olefins into jet fuel*

Coordination Chemistry Convention, Société Chimique de France, 2022, Lille, France.

- Poster presentation: *Nickel-based supported catalysts for the oligomerization of light olefins into jet fuel*