

Jordan Claus

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🆔 Jordan Claus








Education

- 2020 – 2023 **Ph.D., Physics, University of Lille, France**
Title : *Characterization, microsolvation and reactivity of aerosols precursors by microwave and infrared spectroscopy and quantum chemistry calculations.*
Institute : Laboratory Physique des Lasers, Atomes et Molécules (PhLAM) - UMR 8523
Supervisors : Pr Laurent Margulès, Dr Manuel Goubet
- 2018 – 2020 **M. Sc., Fundamental Physics, University of Lille, France**
Light-Matter Interaction, research program, Specialty : Photonics
- 2015 – 2018 **B. Sc., Fundamental Physics, University of Lille, France**



Teaching and research activities

- Jan 2024 – Dec 2024 **Post-doctoral position**
Institute : Rotational and Computational Spectroscopy – Department of Chemistry
“Giacomo Ciamician”,
University of Bologna, Italy
- Sept 2021 – Jun 2023 **Ph.D. assistant**
Institute : Department of Physique, Faculty of Sciences and Technologies,
University of Lille, France
128 hours of teaching in the second year of the Physics/Physics-Chemistry degree
(classical and higher school preparatory classes programs) (electromagnetism, fluid
and solid physics, vibratory phenomena and thermodynamics)
- Oct 2020 – Dec 2023 **Ph.D. student**
Institute : Laboratory Physique des Lasers, Atomes et Molécules - UMR 8523,
University de Lille, France
- Feb 2020 – Jun 2020 **Master 2 internship, 5 months**
Title : *Study of the microsolvation and reactivity of volatile organic compounds by gas
phase spectroscopy and quantum calculations*
Institute : Laboratory Physique des Lasers, Atomes et Molécules - UMR 8523,
University of Lille, France
Tutor : Dr Manuel Goubet
- May 2019 – Jun 2019 **Master 1 internship, 2 months**
Title : *Detection of nitrous oxides by wavelength modulation spectroscopy*
Institute : Laboratory de Physico-Chimie de l'Atmosphère - UR 4493,
University of Littoral Côte d'Opale, France
Tutor : Dr Tong Nguyen Ba
- Sept 2018 – Jun 2019 **Tutor**
Mathematics, physics, computer science, programming and electronics, revision as-
sistance for first year degree students
Institute : Department of Physics, Faculty of Sciences and Technologies,
University of Lille, France

Other activities





- Feb 2024 – Jun 2024  Share in the supervision of a Master 2 trainee (Agathe Maillard)
- May 2023  Member of the Improvement Committee for the Lille Physics Master's Degree
- Feb 2023 – Jun 2023  Share in the supervision of a Master 2 trainee (Thérèse Farah)
- Feb 2022 – Jun 2022  Share in the supervision of a Master 2 trainee (Colwyn Bracquart)
- Oct 2021  Participation in the science festival at the University of Lille (Referent: Dr Florent Real)

Publications



- 1 L. D. S. Sa, A. Camiruaga, K. L. Barbu-Debus, *et al.*, "Environment effects on the structure of succinic acid," *in prep*, 2024.
- 2 S. Chawananon, P. Asselin, **J. A. Claus**, *et al.*, "Rovibrational spectroscopy of trans and cis conformers of 2-furfural from high-resolution fourier transform and qcl infrared measurements," *Molecules*, vol. 28, no. 10, p. 4165, 2023.  DOI: 10.3390/molecules28104165.
- 3 **J. A. Claus**, C. Bermúdez, V. Vallet, L. Margulès, and M. Goubet, "The hydration of an oxy-polycyclic aromatic compound: The case of naphthaldehyde," *Physical Chemistry Chemical Physics*, 2023.  DOI: 10.1039/d3cp02649c.

Conferences, oral contributions and posters

Oral contributions

- 1 C. Bracquart, M. Chrayteh, A. Cuisset, **J. A. Claus**, A. Deguine, and M. Goubet, "INVESTIGATION OF THE MICROSOLVATION OF SECONDARY ORGANIC AEROSOL PRECURSORS: MICROWAVE SPECTROSCOPY OF NITROMETHOXYPHENOLS HYDRATES," in *28th colloquium on High Resolution Molecular Spectroscopy - HRMS*, Dijon, France, Aug. 2023.  URL: <https://hal.science/hal-04441459>.
- 2 **J. A. Claus**, C. Bermudez, M. Goubet, and L. Margules, "The hydration of polycyclic aromatic compounds: the case of naphthaldehyde," in *26th International Conference on High-Resolution Molecular Spectroscopy (HRMS Praha 2022)*, Praha, Czech Republic, Aug. 2022.  URL: <https://hal.science/hal-03770131>.
- 3 **J. A. Claus**, C. Bermudez, L. Margules, and M. Goubet, "The hydration of polycyclic aromatic compounds: the case of naphthaldehyde," in *Journées plénières 2022 du GDR EMIE*, Dunkerque, France, Jun. 2022.  URL: <https://hal.science/hal-03696700>.
- 4 **J. A. Claus**, C. Bermudez, M. Goubet, and L. Margules, "The hydration of polycyclic aromatic compounds: the case of α -naphthaldehyde," in *27th Colloquium on High-Resolution Molecular Spectroscopy (HRMS Cologne 2021)*, Cologne, Germany, Aug. 2021.  URL: <https://hal.science/hal-03725148>.

Posters

- 1 P. Asselin, S. Chawananon, **J. A. Claus**, *et al.*, *Rovibrational spectroscopy of trans- and cis- conformers of 2-furfural from high resolution Fourier transform and QCL infrared measurements*, Pierre Asselin, Sathapana Chawananon, Jordan A. Claus, Manuel Goubet, Anthony Roucou, *et al.* Rovibrational spectroscopy of trans- and cis- conformers of 2-furfural from high resolution Fourier transform and QCL infrared measurements. 28th colloquium on High Resolution Molecular Spectroscopy - HRMS, Aug 2023, Dijon, France. Poster, Aug. 2023.  URL: <https://hal.science/hal-04441439>.
- 2 C. BRACQUART, **J. A. Claus**, M. Goubet, L. Margules, M. Chrayteh, and A. Cuisset, *Investigation of atmospheric interest molecules: rotational spectroscopy of nitro-methoxyphenols*, Comité Scientifique CaPPA 2022, Poster, Nov. 2022.  URL: <https://hal.science/hal-03846997>.

- 3 J. A. Claus, C. Bermudez, M. Goubet, and L. Margules, *Microsolvation of naphthaldehyde, an aerosol precursor, studied by microwave spectroscopy*, Comité Scientifique CaPPA 2021, Poster, Nov. 2021. [URL: https://hal.science/hal-03725341](https://hal.science/hal-03725341).

Skills

Languages	French (Mother tongue), English (C1), Italian (A2/B1)
Spectroscopy	SPFIT/SPCAT, AABS suite program, Pgopher, Gaussian, NCIPlot, AIMALL
Programming	Python, C++, bash, L ^A T _E X
Computer Science	Word, Excel, PowerPoint, OriginPro
Misc	Academic research, teaching

Miscellaneous Experience

- Mar 2022 Participation in the "Tour de France de la Spectroscopie" organised by the GDR EMIE (Edifices Moléculaires Isolés et Environnés) (Referent: Dr Samir Kassi, Dr Olivier Pirali)
- 2021,2023 Introduction to Deep Learning training (FIDLE) organised by the University of Grenoble

References

Manuel Goubet

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Olivier Pirali

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