

Gabriella Di Genova, Ph.D.

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📖 Dip. di Chimica, Biologia e Biotecnologie, Via Elce di Sotto 8, 06123, Perugia - Italy

Academic Interests

My interdisciplinary work combines the fields of chemistry, theoretical chemistry and astrophysics to tackle some of the open questions of astrochemistry with the ultimate goal to learn about fundamental chemical processes in our Universe.




Education

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|-------------------|---|
| 2022 – 2025 | 📖 Ph.D. in Chemical Sciences
Università degli Studi di Perugia - Dipartimento di Chimica, Biologia e Biotecnologie
<i>Curriculum: Theoretical Chemistry and Computational Modelling. Ph.D Supervisors: Prof. Nadia Balucani, Prof. Cecilia Ceccarelli, Prof. Marzio Rosi</i> |
| 09/2021 – 04/2022 | 📖 Master in Theoretical Chemistry and Computational Modeling - TCCM
Université Toulouse III - Paul Sabatier, Department of Chemistry |
| 09/2020 – 07/2022 | 📖 Master's degree - LM-54 2nd level degree
Università degli Studi di Perugia - Dipartimento di Chimica, Biologia e Biotecnologie
<i>Thesis title: Theoretical study of the impact of metals on (Star)dust formation: focus on Ag-PAH clusters.</i> |
| 2017 – 2020 | 📖 Bachelors's degree - L27 1st level degree
Università degli Studi di Perugia - Dipartimento di Chimica, Biologia e Biotecnologie
<i>Thesis title: An experimental study of the reaction between atomic nitrogen in the excited ²D state with cyanoacetylene and implication for the atmospheric chemistry of Titan.</i> |

Research Abroad

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|-------------------------|--|
| 07/01/2025 – 31/01/2025 | 📖 Universitat Autònoma de Barcelona, Departament de Química.
Faculty of Sciences 08193 - Barcelona, Spain.
During this period I worked with Albert Rimola on the characterization of structures, and energetics, of interstellar grains. |
| 01/06/2024 – 30/09/2024 | 📖 Institut de Planetologie et d'Astrophysique de Grenoble (IPAG).
122 rue de la Piscine, 38041 Grenoble - France.
During this period I worked with Cecilia Ceccarelli on the theoretical modeling for reactions of astrochemical relevance. |
| 01/11/2023 – 30/11/2023 | 📖 Universitat Autònoma de Barcelona, Departament de Química.
Faculty of Sciences 08193 - Barcelona, Spain.
During this period I worked with Albert Rimola on the characterization of structures, and energetics, of interstellar grains. |


Research Abroad (continued)

- 11/04/2023 – 15/07/2023  **University of Gothenburg, Department of Chemistry.**
Kemigården 4, 412 96 Göteborg, Sweden.
During this period I worked with Gunnar Nyman on the investigation of astrochemical relevant molecules formation by radiative association.
- 19/02/2023 – 20/03/2023  **Institut de Planetologie et d'Astrophysique de Grenoble (IPAG).**
122 rue de la Piscine, 38041 Grenoble - France.
During this period I worked with Cecilia Ceccarelli on the theoretical modeling for reactions of astrochemical relevance.
- 01/02/2022 – 30/04/2022  **Université Toulouse III - Paul Sabatier, Quantum Chemistry and Physics Laboratory - LCPQ.**
118 Route de Narbonne, 31062 Toulouse, France.
During this period I worked on my Master's degree with Aude Simon on the study of the impact of metals in stardust formation.



Scholarships

- 01/06/2024 – 30/09/2024  **Erasmus+ Traineeship**
Institut de Planetologie et d'Astrophysique de Grenoble (IPAG). Grenoble, France
Supervisor: Cecilia Ceccarelli
- 15/05/2023 – 15/07/2023  **Erasmus+ Traineeship**
University of Gothenburg - Department of Chemistry. Gothenburg, Sweden
Supervisor: Gunnar Nyman
- 19/02/2023 – 20/03/2023  **Erasmus+ Traineeship**
Institut de Planetologie et d'Astrophysique de Grenoble (IPAG). Grenoble, France
Supervisor: Cecilia Ceccarelli
- 01/09/2021 – 30/04/2022  **Erasmus+**
Université Toulouse III - Paul Sabatier. Toulouse, France
- 2017 – 2022  **A.Di.S.U.**
Scholarship for University education
- 2021 – 2022  **A.Di.S.U.**
For international mobility

Employment History










- 2022 – 2025  **Student support**, Università degli Studi di Perugia, Via Elce di Sotto 8 - Perugia 06123, Italy.
Provided teaching support for first-year bachelor's students for the "Chimica Generale e Inorganica I" course (60 hours) and served as a Buddy for Erasmus outgoing and incoming students (150 hours).

Employment History (continued)

- 03/2021 – 08/2021  **Secretary at student's welcome desk**, A.Di.S.U. Perugia, Via Benedetta, 14 - 06123 Perugia, Italy.
Support to the offices of the agency in charge of reception and orientation for Italian and foreign students.
- 2020  **Undergraduate Internship**. Master-Up S.r.l., Via Elce di Sotto 8 - Perugia 06123, Italy.
Contribution to the improvement of a computer software useful for the purposes of online tests.



Conferences and Schools



Attended

- 1 “ACO - Chemical Processes in Solar-type Star-Forming Regions,” Toulouse, France 5-9/06/2023, **Poster contribution**.  URL: <https://aco-conference2023.sciencesconf.org/>.
- 2 “DCTC - VIII Congresso Nazionale della Divisione di Chimica Teorica e Computazionale della SCI,” Pisa, Italy 20-22/09/2023, **Selected Oral contribution**.  URL: <https://www.skies-village.it/dctc2023/>.
- 3 “EGU General Assembly 2024,” Vienna, Austria 14-19/04/2024, **Selected Oral contribution**.  URL: <https://www.egu24.eu/>.
- 4 “EPSC, Europlanet Science Congress 2024,” Berlin, Germany 8-13/09/2024, **Selected Oral contribution**.  URL: <https://www.epsc2024.eu/>.
- 5 “IMAMPC'2024 – 13th International Meeting on Atomic and Molecular Physics and Chemistry,” Warsaw, Poland 9-12/07/2024, **Selected Oral contribution**.  URL: <https://www.imampc2024.pl/>.
- 6 “Quantumgrain Workshop: Emerging Horizons in the Chemistry of the Universe,” Barcelona, Spain 9-12/06/2024, **Selected Oral contribution**.  URL: <https://workshop.quantumgrain.eu/>.
- 7 “School of Scientific Communication in Astronomy,” Bertinoro, Italy 2-6/10/2023.  URL: <https://andymelandri.wixsite.com/scia2023>.
- 8 “SECSmol - Southern European Conference on the Science of Molecules,” Perugia, Italy 27-29/09/2023, **Selected Oral contribution**.  URL: <http://www.dccb.unipg.it/en/secsmol>.
- 9 “XIX Congresso Nazionale di Scienze Planetarie,” Bormio, Italy 5-9/02/2024, **Selected Oral contribution**.  URL: <https://www.scienzeplanetarie.it/congresso-nazionale-bormio-2024/>.

Research Production

Publications

- 1 **Di Genova, Gabriella**, J. Perrero, M. Rosi, C. Ceccarelli, A. Rimola, and N. Balucani, “Hot Sulfur on the Rocks: The Reaction of Electronically Excited Sulfur Atoms with Water in an Ice-Surface Model,” in *ACS Earth and Space Chemistry*, 2025.  URL: <https://pubs.acs.org/doi/10.1021/acsearthspacechem.4c00351>.
- 2 L. Giani, M. Šimsová née Zámečníková, **Di Genova, Gabriella**, C. Ceccarelli, N. Balucani, and G. Nyman, “Isotope effect on the formation of CN by radiative association reactions,” in *AIP Advances*, vol. 14, 2024.  URL: <https://pubs.aip.org/aip/adv/article-lookup/doi/10.1063/5.0192682>.

- 3 A. Giustini, **Di Genova, Gabriella**, N. Balucani, C. Ceccarelli, M. Rosi, and A. Lombardi, "Theoretical Insights on the $S(^1D) + H_2O$ Reaction and Implications on the Chemistry at the Surface of Ice in Extraterrestrial Environments," in *International Conference on Computational Science and Its Applications*, Springer, 2024, pp. 274–282.  URL: https://doi.org/10.1007/978-3-031-65343-8_19.
- 4 A. Giustini, **Di Genova, Gabriella**, D. Skouteris, C. Ceccarelli, M. Rosi, and N. Balucani, "Gas-Phase and Model Ice-Surface Reactions of $S(^1D)$ with Water and Methanol: A Computational Investigation and Implications for Cosmochemistry/Astrochemistry," in *ACS Earth and Space Chemistry*, vol. 8, 2024, pp. 2318–2333.  URL: <https://pubs.acs.org/doi/10.1021/acsearthspacechem.4c00229>.

Skills

Languages	📖 Native: Italian. Strong reading, writing and speaking competencies for: English, Catalan, Romanian. Basic reading, writing and speaking competencies for Spanish and French.
Coding	📖 Fortran77, Python, R, \LaTeX ,
Misc.	📖 Presentation Software (advanced), Spreadsheets (advanced), Word processors (advanced), Network architecture (basic), Operating systems (advanced), Data modeling tools (intermediate).

References

Prof. Nadia Balucani

University of Perugia,
Via Elce di Sotto, 8 - 06123 Perugia - Italy
<https://nadiabalucani.weebly.com/>

Prof. Marzio Rosi

Università degli Studi di Perugia
Dipartimento di Ingegneria Civile ed Ambientale
Via G. Duranti, 93 - 06125 - Perugia, Italy
<https://www.unipg.it/personale/marzio.rosi>

Prof. Gunnar Nyman

University of Gothenburg
Department of Chemistry
Kemigården 4, 412 96 Göteborg, Sweden
<https://www.gu.se/en/about/find-staff/gunnarnyman>

Prof. Cecilia Ceccarelli

Université Grenoble Alpes
Institut de Planétologie et d'Astrophysique de Grenoble
122 rue de la Piscine, 38041 Grenoble - France
<https://ipag.osug.fr/french/recherche/equipes/interstellaire/>

Prof. Aude Simon

Université Toulouse III - Paul Sabatier
Quantum Chemistry and Physics Laboratory - LCPQ
118 Route de Narbonne, 31062 Toulouse, France
<https://www.lcpq.ups-tlse.fr/spip.php?article1130>

Prof. Albert Rimola

Universitat Autònoma de Barcelona
Departament de Química
Faculty of Sciences 08193 - Barcelona, Spain
<https://www.quantumgrain.eu/>