

Curriculum vitæ of Giada Franceschi, Ph.D.

Postdoctoral Researcher in Physics at the TU Wien, Vienna, Austria

[Google Scholar](#) [ORCID](#)

franceschi@iap.tuwien.ac.at, +43 6702019901
Inst. Appl. Phys., TU Wien, Wiedner Haupstr. 8-10/E134, 1040, Vienna (AT)



Giada Franceschi

Research Interests and Areas of Expertise

Surface science of metal oxides (In_2O_3 , Fe_2O_3 , SrTiO_3 , $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$) and silicates (muscovite mica, K-feldspars); atomically controlled growth of metal oxide thin films; mineral-water interactions; ice nucleation.

Ultra-high vacuum (UHV) based surface science methods, including scanning tunneling microscopy (STM), non-contact atomic force microscopy (nc-AFM), low-energy electron diffraction (LEED), X-ray photoelectron spectroscopy (XPS), low-energy ion scattering (LEIS).

Education and Employment

2025– PI @ Inst. Appl. Phys., TU Wien (AT).

2024–25 Maternity leave

2021–24 Post-doc @ Inst. Appl. Phys., TU Wien (AT).

2020–21 Post-doc @ Dept. Phys, FU Berlin (DE) (*Covid pandemic*).

2016–20 Ph.D. in Physics (*with honors*) @ Inst. Appl. Phys., TU Wien (AT).

2014–16 M.Sc., Eng. Physics (Nanophysics and Nanotechnology) @ Politecnico di Milano (IT). *110/110 cum laude*. Thesis abroad @ Inst. Appl. Phys., TU Wien (AT).

2011–14 B.Sc., Eng. Physics @ Politecnico di Milano (IT). *110/110*.

Grants and Honors

2024 FWF Elise Richter grant “*Surface reactivity of silicates at the atomic level (SURREAL)*” (RIC 4539124, 543 k€, 2025–2029).

2023 Peter Varga Poster Prize at the 35th Symposium on Surface Science.

2021 Humboldt Research Fellowship: “*Proximity effects in magnetic/superconducting 2D heterostructures*” (*not assumed due to circumstances tied to the Covid pandemic*).

2020 Finalist for the Nottingham Prize at the Annual Physical Electronics Conference.

2020 Poster prize at the 12th International Workshop on Oxide Surfaces.

2016 Scholarship for Thesis abroad (offered by Politecnico di Milano, IT).

Publications

Total: 30 publications (15 first author, 7 corresponding* author), incl. 3 book chapters.

Most important publications:

- [G. Franceschi*](#), A. Conti, L. Lezuo, R. Abart, F. Mittendorfer, M. Schmid, and U. Diebold
 NH_3 adsorption and competition with H_2O on a hydroxylated aluminosilicate surface

[J. Chem. Phys., 160, 164312 \(2024\)](#). *Editor's pick; 2024 JCP Emerging Investigators Special Collection; AIP Publishing Showcase*

- [G. Franceschi*](#), A. Conti, L. Lezuo, R. Abart, F. Mittendorfer, M. Schmid, and U. Diebold
How water binds to microcline feldspar (001)
[J. Phys. Chem. Lett. 15, 15–22 \(2024\)](#). *Editor's choice; published in Physics Today and Imaging & Microscopy*
- [G. Franceschi*](#), R. Heller, M. Schmid, U. Diebold, and M. Riva,
Evolution of the surface atomic structure of multielement oxide films: curse or blessing?
[Nanoscale Advances 5, 7009–7017 \(2023\)](#)
- [G. Franceschi*](#), S. Brandstetter, J. Balajka, J. Pavelec, I. Sokolovic, M. Setvin, M. Schmid, and U. Diebold,
Interaction of surface cations of cleaved mica with water in vapor and liquid form
[Faraday Discussions 249, 84–97 \(2024\)](#)
- [G. Franceschi*](#), P. Kocan, A. Conti, S. Brandstetter, J. Balajka, I. Sokolovic, M. Valtiner, F. Mittendorfer, M. Schmid, M. Setvin, and U. Diebold,
Resolving the intrinsic short-range ordering of K^+ ions on cleaved muscovite mica
[Nat. Commun. 14, 208 \(2023\)](#). *Published in Imaging & Microscopy*
- [G. Franceschi*](#), M. Schmid, U. Diebold, and M. Riva
Reconstruction changes drive surface diffusion and determine the flatness of oxide surfaces
[J. Vac. Sci. Technol. A 40, 023206 \(2022\)](#). *Editor's pick, AIP Scilight collection*
- [G. Franceschi](#), M. Schmid, U. Diebold, and M. Riva
Two-dimensional surface phase diagram of a multicomponent perovskite oxide: $La_{0.8}Sr_{0.2}MnO_3(110)$
[Phys. Rev. Mater. 5, L092401 \(2021\)](#)
- [G. Franceschi](#), M. Schmid, U. Diebold, and M. Riva
Atomically resolved surface phases of $La_{0.8}Sr_{0.2}MnO_3(110)$ thin films
[J. Mater. Chem. A 8, 22947 \(2020\)](#)
- [G. Franceschi](#),
Pulsed laser deposition of functional oxides with atomic scale control,
[Ph.D. dissertation \(2020\)](#)

Presentations

Total: 37 talks and posters at (inter)national conferences, workshops, and scientific institutions, of which the following 11 invited contributions:

- 2024 37th European Conference on Surface Science (Harrogate, UK)
Seminar @ Uni Wien (Vienna, AT)
24th International Workshop on Oxide Surfaces (Schladming, AT)
- 2023 Seminar @ Space Research Institute (Graz, AT)
Kick-off meeting ICEFELD (Vienna, AT)
Lüscher-Wassermann Seminar (Klosters, CH)
- 2022 11th STM/AFM Workshop (Zakopane, PL)
Seminar @ Physics Dept., Politecnico di Milano (Milano, IT)
Seminar @ Physics Dept., Università Statale di Milano (Milano, IT)
Seminar @ Charles University (Prague, CZ)
Seminar @ Inst. for Microelectronics, TU Wien (Vienna, AT)

(Co-) mentoring

Graduate

2024 Elena Vaníčková
2022– Andrea Conti
2021– Luca Lezuo

Master ad Erasmus

2024 Alexander Hoheneder
2022 Andrea Conti
2021 Ali Yazdani (FU Berlin)
2018 Jakob Hofinger
2017 Sebastian Moser

Bachelor and Projects

2023 Alexander Hoheneder
2020 Nora Hackstock
2018 Rosi Schöfbeck
2017 Sebastian Moser

Teaching

2022 Exercise course for Basic Physics 1a+1b for Physics undergraduates (TU Wien).
2021 Advanced Physics lab course for Physics undergraduates (FU Berlin).
2020 Advanced Physics lab course for Physics undergraduates (FU Berlin).
2006–13 Physics and mathematics tutor for middle- and high-school, and university students.

Community engagement

2019– Peer reviewer for Nano Letters, Nature Communications, Physica status solidi, The Journal of Physical Chemistry Letters, The Journal of Vacuum Science and Technology, The Journal of the American Chemical Society
2024 Organizing the 2nd “Feldspar day” @ TU Wien.
2023 Organizing the 1st “Feldspar day” @ TU Wien to bring together people looking at feldspars from various angles.
2022 Organizing an ImageJ Workshop to share & discuss imaging processing tips within the Surface Physics group.
2022 Opponent for the Master Thesis of Andrea Conti (Università Statale di Milano, IT).
2020 Co-organizing the surface science division program of the Deutsche Physikalische Gesellschaft (DPG) meeting 2020 (*later cancelled due to the Corona pandemic*).

Personal Information

Born in Italy on 19/04/1992; Italian citizenship; permanent residence in Vienna, Austria. Languages: Italian (mother tongue); English (proficient user); German (independent user).

As of September 2024