

Full list of Publications of Giada Franceschi

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Total (since 2018): 30 publications (15 first author, 7 corresponding* author)

Book chapters

- **G. Franceschi**, M. Riva, M. Schmid, and U. Diebold,
Scanning Probe Microscopy
in “The World Scientific Materials Science Handbook of Thin Film Deposition by Molecular Beam Epitaxy”, World Scientific Publishing (2023), *in press*
- **G. Franceschi**, U. Diebold, and J. Balajka,
Atomic structure of oxide surfaces in aqueous environment
in [Encyclopedia of Solid-Liquid Interfaces, Elsevier \(2023\)](#)
- **G. Franceschi*** and U. Diebold
Oxide surfaces
[in Encyclopedia of Materials: Electronics 1, 501–511, Elsevier \(2023\)](#)

Peer Reviewed Publications

- Rafsanjani-Abbasi, F. Buchner, F. J. Lewis, L. Puntischer, F. Kraushofer, P. Sombut, M. Eder, J. Pavelec, E. Rheinfrank, **G. Franceschi**, V. C. Birschtzky, M. Riva, C. Franchini, M. Schmid, U. Diebold, M. Meier, G. K. H. Madsen, G. S. Parkinson
Digging its own Site: Linear Coordination Stabilizes a Pt₁/Fe₂O₃ Single-Atom Catalyst
ACS Nano, *in press* (2024).
- **G. Franceschi***, A. Conti, L. Lezuo, R. Abart, F. Mittendorfer, M. Schmid, and U. Diebold
NH₃ adsorption and competition with H₂O 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 \(2023\)](#)
- J. Redondo, J. Michalička, **G. Franceschi**, B. Šmid, N. Kumar, O. Man, M. Blatnik, D. Wrana, F. Kraushofer, B. Mallada, M. Švec, G. Parkinson, M. Setvin, M. Riva, U. Diebold, and J. Čechal,
Hematite α-Fe₂O₃(0001) in top and side view: resolving long-standing controversies about its surface structure
[Adv. Mater. Interfaces 2300602 \(2023\)](#)
- S. M. Gericke, M. M. Kauppinen, M. Wagner, M. Riva, **G. Franceschi**, A. Posada-Borbon, L. Ramisch, S. Pfaff, E. Rheinfrank, A. M. Imre, A. B. Preobrajenski, S. Appelfeller, S. Blomberg, L. R. Merte, J. Zetterberg, U. Diebold, H. Gronbeck, and E. Lundgren

Effect of different $\text{In}_2\text{O}_3(111)$ surface terminations on CO_2 adsorption
[ACS Appl. Mater. Interfaces **15**, 45367–45377 \(2023\)](#)

- **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 \(2024\)](#)
- S. Trishin, C. Lotze, F. Lohss, **G. Franceschi**, L. I. Glazman, F. von Oppen, and K. J. Franke
Tuning a two-impurity Kondo system by a moiré superstructure
[Phys. Rev. Lett. **130**, 176201 \(2023\)](#). Editor's suggestion
- **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*
- H. Chen, M. Blatnik, C. Ritterhoff, I. Sokolovic, F. Mirabella, **G. Franceschi**, M. Riva, M. Schmid, J. Cechal, B. Meyer, U. Diebold, and M. Wagner,
Water structures reveal local hydrophobicity on the $\text{In}_2\text{O}_3(111)$ surface
[ACS Nano, **16**, 21163 \(2023\)](#)
- **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
- F. Kraushofer, L. Haager, M. Eder, A. Rafsanjani-Abbasi, Z. Jakub, **G. Franceschi**, M. Riva, M. Meier, M. Schmid, U. Diebold, G. S. Parkinson
Single Rh adatoms stabilized on $\alpha\text{-Fe}_2\text{O}_3(1-102)$ by coadsorbed water
[ACS Energy Lett. **7**, 375 \(2021\)](#)
- **G. Franceschi**, M. Schmid, U. Diebold, and M. Riva
Two-dimensional surface phase diagram of a multicomponent perovskite oxide: $\text{La}_{0.8}\text{Sr}_{0.2}\text{MnO}_3(110)$
[Phys. Rev. Mater. **5**, L092401 \(2021\)](#)
- Sokolovic, **G. Franceschi**, Z. Wang, J. Xu, J. Pavelec, M. Riva, M. Schmid, U. Diebold, M. Setvin
Quest for a pristine unreconstructed $\text{SrTiO}_3(001)$ surface: An atomically resolved study via noncontact atomic force microscopy
[Phys. Rev. B **103**, L241406 \(2021\)](#)
- F. Kraushofer, N. Resch, M. Eder, A. Rafsanjani-Abbasi, S. Tobisch, Z. Jakub, **G. Franceschi**, M. Riva, M. Meier, M. Schmid, U. Diebold, G. S. Parkinson
Surface reduction state determines stabilization and incorporation of Rh on $\alpha\text{-Fe}_2\text{O}_3(1-102)$
[Adv. Mater. Interfaces **8**, 2001908 \(2021\)](#)
- **G. Franceschi**, M. Schmid, U. Diebold, and M. Riva
Atomically resolved surface phases of $\text{La}_{0.8}\text{Sr}_{0.2}\text{MnO}_3(110)$ thin films
[J. Mater. Chem. A **8**, 22947 \(2020\)](#)
- **G. Franceschi**,
Pulsed laser deposition of functional oxides with atomic scale control,
[Ph.D. dissertation \(2020\)](#)

- **G. Franceschi**, M. Schmid, U. Diebold, and M. Riva
Movable holder for a quartz crystal microbalance for exact growth rates in pulsed laser deposition
[Rev. Sci. Instrum. **91**, 065003 \(2020\)](#)
- **G. Franceschi**, F. Kraushofer, M. Meier, G. Parkinson, M. Schmid, U. Diebold, and M. Riva
A model system for photocatalysis: Ti-doped single-crystalline Fe₂O₃(1-102) films
[Chem. Mater. **32**, 3753 \(2020\)](#)
- **G. Franceschi**, M. Wagner, J. Hofinger, T. Krajnák, M. Schmid, U. Diebold, and M. Riva
Growth of In₂O₃(111) thin films with optimized surfaces
[Phys. Rev. Mater. **3**, 103403 \(2019\)](#)
- M. Riva, **G. Franceschi**, M. Schmid, and U. Diebold
Epitaxial growth of complex oxide films: Role of surface reconstructions
[Phys. Rev. Research **1**, 033059 \(2019\)](#)
- M. Riva, **G. Franceschi**, Q. Lu, M. Schmid, B. Yildiz, and U. Diebold
Pushing the detection of cation nonstoichiometry to the limit
[Phys. Rev. Mater. **3**, 043802 \(2019\)](#). Editor's pick
- M. Riva, M. Kubicek, X. Hao, **G. Franceschi**, S. Gerhold, M. Schmid, H. Hutter, J. Fleig, C. Franchini, B. Yildiz, and U. Diebold
Influence of surface atomic structure demonstrated on oxygen incorporation mechanism at a model perovskite oxide
[Nat. Commun. **9**, 3710 \(2018\)](#)

Submitted:

- F. Kraushofer, A. M. Imre, **G. Franceschi**, E. Rheinfrank, T. Kisslinger, M. Schmid, U. Diebold, L. Hammer, and M. Riva
ViPERLEED package I: Calculation of I(V) curves and structural optimization
- R. Wanzenböck, E. Heid, M. Riva, **G. Franceschi**, A. M. Imre, J. Carrete, U. Diebold, and G. K. H. Madsen
Machine-learning-backed evolutionary exploration of Ti-rich SrTiO₃(110) surface reconstructions
- L. M. Rütten, H. Schmid, E. Liebhaber, **G. Franceschi**, A. Yazdani, G. Reecht, K. Rossnagel, F. von Oppen, and K. J. Franke
Wave-function engineering on superconducting substrates: Chiral Yu-Shiba-Rusinov molecules
- J. Redondo, F. Ellinger, V. Gabriel, D. Wrana, M. Riva, **G. Franceschi**, E. Rheinfrank, I. Sokolovic, Z. Jakub, F. Kraushofer, A. Alexander, L. Patera, J. Repp, M. Schmid, U. Diebold, G. S. Parkinson, C. Franchini, M. Reticcioli, P. Kocan, M. Setvin
Real-space investigation of polarons in hematite Fe₂O₃

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