


PERSONAL INFORMATION

Cristina Africh



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Sex Female | Date of birth 19/01/1973 | Nationality Italian

WORK EXPERIENCE

18/11/2019 - present

Staff senior researcher (Primo Ricercatore – Il livello – a tempo indeterminato)

Consiglio Nazionale delle Ricerche (CNR) – Istituto Officina dei Materiali (IOM)

- *Head of the CNR-IOM “Surface sTRucture and Reactivity at the Atomic Scale (STRAS)” group (currently 1 senior researcher, 2 staff researcher, 2 post-docs, 2 PhD students, 1 associate professor)*
- *Scientific Coordinator of MUR PNRR RI Project NFFA-Digital Infrastructure (NFFA-DI), 2023-2025, 34 Meur, 4 beneficiaries, 11 Operative Units.*
- *H2020 EU INFRAIA Pilot Project NFFA-Europe (Nanoscience Foundries and Fine Analysis) PILOT, 2021-2026, 15 Meur, 23 beneficiaries, 4 linked third parties and 11 third parties against payment, www.nffa.eu: *Member of the Executive and Strategic Committee; Coordinator of the distributed infrastructure; WP Leader for “WP2 - Pilot scheme for the management of a distributed research infrastructure offering harmonised, interoperable and integrated services”. Leader of Task “11.1 - Closing the ‘environmental-gap’ in microscopy experiments”, specific budget: 270.000 eur**
- *MUR PRIN2017 “Metal Activated 2D cARbon-based platforMs (MADAM)”, 2019-2022, funding 754.000 eur: *Responsible for CNR research units (IOM and IMEM), funding 325.000 eur**
- *Advisor of master and PhD theses and Supervisor of trainees and postdocs*
- *Member of the teaching board for the PhD Course in Nanotechnology at University of Trieste*
- *Member of the CNR-IOM Institute Council (Consiglio d’Istituto)*
- *Referent for the Mission Area Energy&Environment of CNR-IOM*

17/10/2011 – 17/11/2019

Staff researcher (Ricercatore – III livello – a tempo indeterminato)

Consiglio Nazionale delle Ricerche (CNR) – Istituto Officina dei Materiali (IOM)

- *Head of the CNR-IOM “STM-Surface sTRucture and Reactivity at the Atomic Scale” laboratory (on average 1 staff researcher, 2 post-docs, 1 PhD student, 1 MSc student, 1 associate professor)*
- *H2020 EU RIA Project NFFA-Europe (Nanoscience Foundries and Fine Analysis), 2015-2020, 10 Meur, 19 beneficiaries and 3 linked third parties: *Project Manager*, responsible for the day-by-day management of the project and of the operation of the distributed infrastructure (16 nodes across Europe); *Coordinator of the management team (7 people); Responsible for the scientific and administrative interface between the Executive and Scientific Committee and CNR-IOM; Leader of “Task 6.1 - Implementation of Fast-scan capabilities in scanning probe microscopes for in-operando experiments”, 3 partners (CNR, TUM, ICN2) total budget 228.475,70 eur, budget for CNR 102.223,20 eur.**
- *Advisor of master and PhD theses*
- *Member of the teaching board for the PhD Course in Nanotechnology at University of Trieste since 2012*

30/01/2009 – 16/11/2011

Fixed-term researcher (Ricercatore – III livello – a tempo determinato)

Consiglio Nazionale delle Ricerche (CNR) – Istituto Officina dei Materiali (IOM)

- *Responsible* person for the CNR-IOM STM laboratory
- FP7 EU project “Nanoscience Foundries and Fine Analysis (NFFA)” - Design Study for the implementation of a new distributed Research Infrastructure, 2008-2011, 2,27 Meur, 5 beneficiaries: *Member of the Coordinator’s Team* and *leader for the task* on “Nano-metrology”
- *Co-advisor* of master and PhD theses
- *Responsible* for the CNR-IOM seminar program

30/01/2004 – 29/01/2009

Post-doc (Assegnista di ricerca)

Department of Physics, Univeristà degli Studi di Trieste, Italy

- *Responsible* person for a variable-temperature scanning tunneling microscopy (VT-STM) set-up
- *Co-advisor* of master and PhD theses

EDUCATION AND TRAINING

2001-2003

PhD in Physics

EQF level 8

University of Trieste

- Thesis title: “Atomic Scale Investigations of Model Catalysts for Oxidation Reactions”

03-05/2002

Visiting PhD student

Centre for Atomic Scale Physics, University of Aarhus (Denmark)

- Tutor: Prof. Flemming Besenbacher

01-12/2000

Post-graduate fellow

National Institute for the Physics of Matter (INFM), TASC Laboratory, Trieste

1999

Master Degree in Physics (Laurea)

EQF level 7

University of Trieste

- Thesis title: “Study of the deconstruction process of the (1x2) surface of Rh(110) by a variable temperature scanning tunneling microscope”
Score: 110/110 cum laude

PERSONAL SKILLS

Mother tongue

Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills

- good communication skills gained through my experience as project manager, during dissemination of scientific results and outreach events, having taken part to 25 public events (presentations to the general public / interviews on news programs, journals and books / stages for high-school students)

Organisational / managerial skills

- self-organization and coordination of complex activities, gained in carrying out and being responsible for very different scientific and managerial activities in parallel (STRAS research group, Institutional

- duties, educational activity for PhD students , NFFA-DI and NFFA-Europe)
- leadership (currently: setting up as chair governance bodies of NFFA-DI; chair of a board of 5 people - NFFA-Europe IDRIN board; responsible for a team of 3 people - NFFA-Europe IDRIN management team; responsible for a research group of 8 people; previously responsible for a team of 7 people – NFFA-Europe management team)
- problem solving, from daily technical problems to complex administrative and managerial issues, gained in all job-related activities

Job-related skills

- extensive experience in the management of complex research infrastructures (currently: coordinator for the upgrade and integration of 11 Italian leading laboratories as a fully digital single experimental open research infrastructure; coordinator for the integration of the 16 NFFA-Europe Pilot RI nodes in a single interoperable distributed RI for nanoscience (IDRIN); previously: project manager for NFFA-Europe – 8 years total)
- deep understanding of administrative and financial aspects in research management, gained as project manager of NFFA-Europe and as person in charge of the day-by-day management of NFFA-Europe and NEP at CNR-IOM as well as in the preparation and negotiation of NFFA-DI
- skilled in budget monitoring and reporting for large EU H2020 projects, in particular for infrastructure projects, as demonstrated by the success and excellent evaluation of NFFA-Europe and as recognized by the appointment as Coordinator of APRE (Agency for the Promotion of European Research) work group on “Access Costs to Research Infrastructures” in 2014
- skilled in scientific management, as demonstrated by the high-impact of the scientific production of the research group (3 Science and 12 others with I.F.>11) and by the appointment as referent for the Mission Area Energy & Environment of CNR-IOM
- good knowledge in transferring to the market the results of methodological research, as demonstrated by the commercialization of FAST – an add-on module for fast scanning developed within the research group and now sold by ILO - Elettra Sincrotrone Trieste under a non-exclusive license for the use of the underlying patent
- good skills in the development of new tools and methods for fundamental studies on surfaces by scanning probe microscopy (fast scanning, NAP, custom sample holders, modification of commercial instruments)
- skilled in the investigation of fundamental processes on metal surfaces by scanning tunnelling microscopy and photoemission spectroscopy (also with synchrotron radiation), in combination with ab-initio calculations and numerical simulation. In the last ten years specific focus on the growth, functionalization and advanced characterization of CVD graphene.
- teacher for the Short Course on Scanning Probe Microscopy for PhD students in Physics and in Nanotechnology since 2006
- referee for several International Journals and for national projects funded by MIUR

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Independent user	Proficient user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

- good command of office suite (word processor, spread sheet, presentation software)
- good command of image editing software gained as microscopist
- good command of video-conferencing platforms (organizer of several meetings by GoToMeeting, Microsoft Teams, Cisco-Webex, GoogleMeets, Zoom, Skype, Talky)
- basic command of web programming
- good knowledge of FAIR concept and implementation in the management of research data and metadata

Other skills

- versatility, flexibility, negotiation

ADDITIONAL INFORMATION

- Publications** 58 publications, [21 as first author and/or corresponding author and/or last author]: 3 [1] *Science*, 1 *Nature Chemistry*, 1 [1] *Advanced Functional Materials*, 1 *PNAS*, 5 [5] *Carbon*, 1 [1] *Scientific Reports*, 3 [1] *ACS Nano*, 2 [1] *Nano Letters*, 3 [2] *Journal of the American Chemical Society*, 2 [1] *Physical Review Letters*, 2 *ACS Catalysis*, 2 [2] *Journal of Physical Chemistry Letters*, 4 [3] *Nanoscale*, 2 *Angewandte Chemie - International Edition*, 6 [2] *Journal of Chemical Physics*, 2 *Journal of Physical Chemistry B*, 5 [1] *Journal of Physical Chemistry C*, 1 *Langmuir*, 2 *Physical Review B*, 1 *Small*, + 10 [1] others
- Citations** Total citations: 3156 (Scopus)
h-index: 22 (Scopus)
- Selected publications** Sala A., Zou Z., Carnevali V., Panighel M., Genuzio F. Mentę T.O., Locatelli A., Cepek C., Peressi M., Comelli G., Africh C. "Quantum Confinement in Aligned Zigzag "Pseudo-Ribbons" Embedded in Graphene on Ni(100)", *Adv. Funct. Mater.* **2021**, 2105844 (2021).
Patera, L. L.; Bianchini, F.; Africh, C.*; Dri, C.; Soldano, G.; Mariscal, M. M.; Peressi, M.; Comelli, G., "Real-time imaging of adatom-promoted graphene growth on nickel", *Science* **359**, 1243-1246 (2018).
Eren, B.; Zherebetskyy, D.; Patera, L. L.; Wu, C. H.; Bluhm, H.; Africh, C.; Wang, L.-W.; Somorjai, G.A.; Salmeron, M. "Activation of Cu(111) surface by decomposition into nanoclusters driven by CO adsorption", *Science* **351**, 475-478 (2016).
Patera, L. L.; Africh, C.*; Weatherup, R. S.; Blume, R.; Bhardwaj, S.; Castellarin-Cudia, C.; Knop-Gericke, A.; Schloegl, R.; Comelli, G.; Hofmann, S.; Cepek, C. "In Situ Observations of the Atomistic Mechanisms of Ni Catalyzed Low Temperature Graphene Growth", *ACS Nano* **7** 7901-7912 (2013).
Lafferentz, L.; Eberhardt, V.; Dri, C.; Africh, C.; Comelli, G.; Esch, F.; Hecht, S.; Grill, L., "Controlling on-surface polymerization by hierarchical and substrate-directed growth", *Nature Chemistry* **4** 215-220 (2012).
Esch, F.; Fabris, S.; Zhou, L.; Montini, T.; Africh, C.; Fornasiero, P.; Comelli, G.; Rosei, R., "Electron localization determines defect formation on ceria substrates", *Science* **309** 752-755 (2005).
- Conferences and Seminars** 21 invited talks, 9 contributed talks and 8 poster presentations
- Patents** "Method for driving a scanning probe microscope at elevated scan frequencies". F. Esch, C. Dri, G. Comelli, C. Africh, A. Spessot. (EU patent n. EP2428804; US patent n. US8726409).
- Projects** 2023 – 2025 MUR PNRR-RI "NFFA-Digital Infrastructure (NFFA-DI)" – Scientific Coordinator
2021 – 2026 EU-H2020 Project "NFFA- Europe PILOT" INFRAIA-03-2020 Pilot Call – Coordinator of the Interoperable Distributed Research Infrastructure for Nanoscience (IDRIN), member of the executive and Strategic Committee, WP leader and scientific coordinator for the task on "Closing the 'environmental-gap' in microscopy experiments"
2019-2022 MUR-PRIN2017 "Metal Activated 2D cArbon-based platforMs (MADAM)", Responsible for CNR research units (IOM and IMEM)
2015 – 2021 EU-H2020 Project "NFFA- Europe" Research&Innovation Action for the integration of Research Infrastructures – Project manager and scientific coordinator for the task on "Implementation of Fast-scan capabilities in scanning probe microscopes for in-operando experiments"
01/01/2014 – 31/12/2016 MIUR-Progetto Premiale 2012 "ABNANOTECH" - participant of CNR unit, in charge of STM studies
01/02/2013 – 31/01/2016 MIUR-PRIN 2010-2011 "Hi-Phuture" – participant of CNR-IOM unit, in charge of STM studies
01/01/2011 – 31/08/2012 ESF-FANAS Eurocores Project "Nanomanipulation of Metallic Clusters on Insulating Substrates (NOMCIS)" – Principal investigator for the CNR Unit
01/05/2009 – 31/12/2010 ESF-FANAS Eurocores Project "Nanomanipulation of Metallic Clusters on Insulating Substrates (NOMCIS)" – referent for the CNR Unit on behalf of the principal investigator
01/06/2008 – 31/01/2011 EU-FP7 NFFA (Nanoscience Foundries and Fine Analysis) - Design Study for the implementation of a new distributed Research Infrastructure - member of the Coordinator's team and scientific coordinator for the task on "Nano-metrology"

01/01/2002 – 31/12/2002 Principal investigator for “Progetto Giovani Ricercatori anno 2001” funded by Università degli Studi di Trieste

- Organization of conferences**
- 2017: Member of the organizing committee of the FisMat 2017 conference, Trieste Oct. 1-5, approx. 400 participants
 - 2017: Chair of the organizing committee of the First NFFA-Europe Science workshop, Trieste March 27-28, approx 80 participants
 - 2015: Member of the organizing committee of the 12th edition of the European Conference on Surface Crystallography and Dynamics (ECSCD-12), Trieste Oct. 18-21, aprox. 65 participants
- Additional qualifications**
- 2021 – present: qualified (“idoneo”) for a position as Research Director (Dirigente di Ricerca) at CNR – Strategic Area Condensed Matter
 - 2021-2030: National Academic Qualification as Full Professor (Professore Ordinario) in Experimental Physics of Matter
 - 2018-2024: National Academic Qualification as Associate Professor (Professore Associato) in Experimental Physics of Matter

ANNEXES

- Full list of scientific publications.

Personal data *According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV.*

Full list of publications

- Patera L.L., Zou Z., Sala A., Panighel M., Tosi E., Lacovig P., Lizzit S., Scardamaglia M., Kokkonen E., Cepek C., Africh C., Comelli G., Günther S.
In Situ Observation of C-C Coupling and Step Poisoning during the Growth of Hydrocarbon Chains on Ni(111)
(2022) *Angewandte Chemie - International Edition*, in press
- Baranowski D., Cojocariu I., Sala A., Africh C., Comelli G., Schio L., Tormen M., Floreano L., Feyer V., Schneider C. M.
Conservation of Nickel Ion Single-Active Site Character in a Bottom-Up Constructed π -Conjugated Molecular Network
(2022) *Angewandte Chemie - International Edition*, **61**, e202210326
- Sala A., Caporali M., Armillotta F., Vesselli E., Genuzio F., Menteş T. O., Locatelli A., Comelli G., Africh C., Verdini A.
Black or Red Phosphorus yield the same Blue
(2022) *Nanoscale*, **14**, 6256-16261
- Chesnyak V., Stavrić S., Panighel M., Comelli G., Peressi M., Africh C.
Carbide coating on Nickel to enhance the stability of supported metal nanoclusters
(2022) *Nanoscale*, **14**, 3589-3598.
- Pierantozzi, G.M., De Vita, A., Bigi, C., Gui, X., Tien, H.-J., Mondal, D., Mazzola, F., Fujii, J., Vobornik, I., Vinai, G., Sala, A., Africh, C., Lee, T.-L., Rossi, G., Chang, T.-R., Xie, W., Cava, R.J., Panaccione, G.
Evidence of magnetism-induced topological protection in the axion insulator candidate EuSn₂P₂
(2022) *Proceedings of the National Academy of Sciences of the United States of America*, **119** (4), art. no. e2116575119.
- Sala, A., Zou, Z., Camevali, V., Panighel, M., Genuzio, F., Menteş, T.O., Locatelli, A., Cepek, C., Peressi, M., Comelli, G., Africh, C.
Quantum Confinement in Aligned Zigzag “Pseudo-Ribbons” Embedded in Graphene on Ni(100)
(2022) *Advanced Functional Materials*, **32**, 2105844.
- Sturmeit, H.M., Cojocariu, I., Windischbacher, A., Puschnig, P., Piamonteze, C., Jugovac, M., Sala, A., Africh, C., Comelli, G., Cossaro, A., Verdini, A., Floreano, L., Stredansky, M., Vesselli, E., Hohner, C., Kettner, M., Libuda, J., Schneider, C.M., Zamborlini, G., Cinchetti, M., Feyer, V.
Room-Temperature On-Spin-Switching and Tuning in a Porphyrin-Based Multifunctional Interface
(2021) *Small*, **17** (50), art. no. 2104779.
- Del Puppo, S., Carnevali, V., Perilli, D., Zarabara, F., Rizzini, A.L., Fornasier, G., Zupanič, E., Fiori, S., Patera, L.L., Panighel, M., Bhardwaj, S., Zou, Z., Comelli, G., Africh, C., Cepek, C., Di Valentin, C., Peressi, M.
Tuning graphene doping by carbon monoxide intercalation at the Ni(111) interface
(2021) *Carbon*, **176**, pp. 253-261.
- Zou, Z., Patera, L.L., Comelli, G., Africh, C.
Strain release at the graphene-Ni(100) interface investigated by in-situ and operando scanning tunnelling microscopy
(2021) *Carbon*, **172**, pp. 296-301.
- Fiori, S., Perilli, D., Panighel, M., Cepek, C., Ugolotti, A., Sala, A., Liu, H., Comelli, G., Di Valentin, C., Africh, C.
“Inside out” growth method for high-quality nitrogen-doped graphene
(2021) *Carbon*, **171**, pp. 704-710.
- Zou, Z., Patera, L.L., Comelli, G., Africh, C.
Honeycomb on square lattices: Geometric studies and strain analysis of Moiré structures at a symmetry-mismatched interface
(2020) *Journal of Physical Chemistry C*, **124** (46), pp. 25308-25315.
- Perilli, D., Fiori, S., Panighel, M., Liu, H., Cepek, C., Peressi, M., Comelli, G., Africh, C., Di Valentin, C.
Mechanism of CO Intercalation through the Graphene/Ni(111) Interface and Effect of Doping
(2020) *Journal of Physical Chemistry Letters*, **11** (20), pp. 8887-8892.

- Zou, Z., Carnevali, V., Patera, L.L., Jugovac, M., Cepek, C., Peressi, M., Comelli, G., Africh, C.
Operando atomic-scale study of graphene CVD growth at steps of polycrystalline nickel
(2020) *Carbon*, **161**, pp. 528-534.
- Dri, C., Panighel, M., Tiemann, D., Patera, L.L., Troiano, G., Fukamori, Y., Knoller, F., Lechner, B.A.J., Cautero, G., Giuressi, D., Comelli, G., Fraxedas, J., Africh, C., Esch, F.
The new FAST module: A portable and transparent add-on module for time-resolved investigations with commercial scanning probe microscopes
(2019) *Ultramicroscopy*, **205**, pp. 49-56.
- Camevali, V., Patera, L.L., Prandini, G., Jugovac, M., Modesti, S., Comelli, G., Peressi, M., Africh, C.
Doping of epitaxial graphene by direct incorporation of nickel adatoms
(2019) *Nanoscale*, **11** (21), pp. 10358-10364.
- Achilli, S., Tognolini, S., Fava, E., Ponzoni, S., Drera, G., Cepek, C., Patera, L.L., Africh, C., Castillo, E.D., Trioni, M.I., Pagliara, S.
Surface states characterization in the strongly interacting graphene/Ni(111) system
(2018) *New Journal of Physics*, **20** (10), art. no. 103039, .
- Zou, Z., Carnevali, V., Jugovac, M., Patera, L.L., Sala, A., Panighel, M., Cepek, C., Soldano, G., Mariscal, M.M., Peressi, M., Comelli, G., Africh, C.
Graphene on nickel (100) micrograins: Modulating the interface interaction by extended moiré superstructures
(2018) *Carbon*, **130**, pp. 441-447.
- Patera, L.L., Bianchini, F., Africh, C., Dri, C., Soldano, G., Mariscal, M.M., Peressi, M., Comelli, G.
Real-time imaging of adatom-promoted graphene growth on nickel
(2018) *Science*, **359** (6381), pp. 1243-1246.
- Stredansky, M., Sala, A., Fontanot, T., Costantini, R., Africh, C., Comelli, G., Floreano, L., Morgante, A., Cossaro, A.
On-surface synthesis of a 2D boroxine framework: A route to a novel 2D material?
(2018) *Chemical Communications*, **54** (32), pp. 3971-3973.
- Drera, G., Cepek, C., Patera, L.L., Bondino, F., Magnano, E., Nappini, S., Africh, C., Lodi-Rizzini, A., Joshi, N., Ghosh, P., Barla, A., Mahatha, S.K., Pagliara, S., Giampietri, A., Pintossi, C., Sangaletti, L.
Identification of Ni₂C electronic states in graphene-Ni(111) growth through resonant and dichroic angle-resolved photoemission at the C K-edge
(2017) *Physical Review B*, **96** (16), art. no. 165442, .
- Vesselli, E., Rizzi, M., Furlan, S., Duan, X., Monachino, E., Dri, C., Peronio, A., Africh, C., Lacovig, P., Baldereschi, A., Comelli, G., Peressi, M.
Tunability of the CO adsorption energy on a Ni/Cu surface: Site change and coverage effects
(2017) *Journal of Chemical Physics*, **146** (22), art. no. 224707, .
- Patera, L.L., Zou, Z., Dri, C., Africh, C., Repp, J., Comelli, G.
Imaging on-surface hierarchical assembly of chiral supramolecular networks
(2017) *Physical Chemistry Chemical Physics*, **19** (36), pp. 24605-24612.
- Prevedello, A., Bazzan, I., Dalle Carbonare, N., Giuliani, A., Bhardwaj, S., Africh, C., Cepek, C., Argazzi, R., Bonchio, M., Caramori, S., Robert, M., Sartorel, A.
Heterogeneous and Homogeneous Routes in Water Oxidation Catalysis Starting from CuII Complexes with Tetraaza Macrocyclic Ligands
(2016) *Chemistry - An Asian Journal*, **11** (8), pp. 1281-1287.
- Eren, B., Zherebetsky, D., Patera, L.L., Wu, C.H., Bluhm, H., Africh, C., Wang, L.-W., Somorjai, G.A., Salmeron, M.
Activation of Cu(111) surface by decomposition into nanoclusters driven by CO adsorption
(2016) *Science*, **351** (6272), pp. 475-478.
- Africh, C., Cepek, C., Patera, L.L., Zamborlini, G., Genoni, P., Montes, T.O., Sala, A., Locatelli, A., Comelli, G.
Switchable graphene-substrate coupling through formation/dissolution of an intercalated Ni-carbide layer
(2016) *Scientific Reports*, **6**, art. no. 19734, .

- Zamborlini, G., Imam, M., Patera, L.L., Menteş, T.O., Stojić, N., Africh, C., Sala, A., Binggeli, N., Comelli, G., Locatelli, A.
Nanobubbles at GPa Pressure under Graphene
(2015) *Nano Letters*, **15** (9), pp. 6162-6169.
- Olmos-Asar, J.A., Monachino, E., Dri, C., Peronio, A., Africh, C., Lacovig, P., Comelli, G., Baldereschi, A., Peressi, M., Vesselli, E.
CO on supported Cu nanoclusters: Coverage and finite size contributions to the formation of carbide via the boudouard process
(2015) *ACS Catalysis*, **5** (5), pp. 2719-2726.
- Baby, A., Fratesi, G., Vaidya, S.R., Patera, L.L., Africh, C., Floreano, L., Brivio, G.P.
Anchoring and bending of pentacene on aluminum (001)
(2015) *Journal of Physical Chemistry C*, **119** (7), pp. 3624-3633.
- Patera, L.L., Bianchini, F., Troiano, G., Dri, C., Cepek, C., Peressi, M., Africh, C., Comelli, G.
Temperature-driven changes of the graphene edge structure on Ni(111): Substrate vs hydrogen passivation
(2015) *Nano Letters*, **15** (1), pp. 56-62.
- Bianchini, F., Patera, L.L., Peressi, M., Africh, C., Comelli, G.
Atomic scale identification of coexisting graphene structures on Ni(111)
(2014) *Journal of Physical Chemistry Letters*, **5** (3), pp. 467-473.
- Cepellotti, A., Peronio, A., Marchini, S., Abdurakhmanova, N., Dri, C., Africh, C., Esch, F., Comelli, G., Peressi, M.
NH₃-NO coadsorption system on Pt(111). II. Intermolecular interaction
(2013) *Journal of Physical Chemistry C*, **117** (41), pp. 21196-21202.
- Peronio, A., Cepellotti, A., Marchini, S., Abdurakhmanova, N., Dri, C., Africh, C., Esch, F., Peressi, M., Comelli, G.
NH₃-NO coadsorption system on Pt(111). I. Structure of the mixed layer
(2013) *Journal of Physical Chemistry C*, **117** (41), pp. 21186-21195.
- Patera, L.L., Africh, C., Weatherup, R.S., Blume, R., Bhardwaj, S., Castellarin-Cudia, C., Knop-Gericke, A., Schloegl, R., Comelli, G., Hofmann, S., Cepek, C.
In situ observations of the atomistic mechanisms of Ni catalyzed low temperature graphene growth
(2013) *ACS Nano*, **7** (9), pp. 7901-7912.
- Locatelli, A., Wang, C., Africh, C., Stojić, N., Menteş, T.O., Comelli, G., Binggeli, N.
Temperature-driven reversible rippling and bonding of a graphene superlattice
(2013) *ACS Nano*, **7** (8), pp. 6955-6963.
- Vesselli, E., Monachino, E., Rizzi, M., Furlan, S., Duan, X., Dri, C., Peronio, A., Africh, C., Lacovig, P., Baldereschi, A., Comelli, G., Peressi, M.
Steering the chemistry of carbon oxides on a NiCu catalyst
(2013) *ACS Catalysis*, **3** (7), pp. 1555-1559.
- Rizzi, M., Furlan, S., Peressi, M., Baldereschi, A., Dri, C., Peronio, A., Africh, C., Lacovig, P., Vesselli, E., Comelli, G.
Tailoring bimetallic alloy surface properties by kinetic control of self-diffusion processes at the nanoscale
(2012) *Journal of the American Chemical Society*, **134** (40), pp. 16827-16833.
- Cavallin, A., Pozzo, M., Africh, C., Baraldi, A., Vesselli, E., Dri, C., Comelli, G., Larciprete, R., Lacovig, P., Lizzit, S., Alfè, D.
Local electronic structure and density of edge and facet atoms at Rh nanoclusters self-assembled on a graphene template
(2012) *ACS Nano*, **6** (4), pp. 3034-3043.
- Lafferentz, L., Eberhardt, V., Dri, C., Africh, C., Comelli, G., Esch, F., Hecht, S., Grill, L.
Controlling on-surface polymerization by hierarchical and substrate-directed growth
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