

Giorgio Rossi

OMISSIS

Born: OMISSIS a *OMISSIS*

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Work place: Dipartimento di Fisica, Università degli Studi di Milano, via Celoria 16, I-20133 Milano; and IOM-CNR, Basovizza Campus, Trieste

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CAREER

1980-1983 Research Associate/Senior at EE Dep.@Stanford University, California US

1983 Post Doc AT&T-Bell Labs, US

1984 Collaborateur SPAS@CEA Saclay FR

1984 Doctorat d'Etat, Univ. P.M. Curie, Paris FR

1984-1985 Chercheur Associé CNRS, LURE, Orsay FR

1985-1995 Chargé de Recherche 1ere Classe CNRS, LURE, Orsay FR

1988-1996 Oberassistent 50% ETH-Zürich, Lab. für Festkörperphysik, Zürich CH

1994-2011 Associate Professor FIS01, Univ. of Modena IT

2000-2009 Director of Laboratorio Nazionale TASC – INFM (CNR after 2005) Trieste IT

2000-2004 Member (elected) of Executive Board of INFM and Direttivo Naz. INFM

2011-PRESENT Full professor FIS03 Dipartimento di Fisica, Università di Milano IT; Member of PhD School

COORDINATION & LEADERSHIP OF RESEARCH GROUPS

1987-1994 SU7 group for surface spectroscopy at CNRS-LURE, FR

1988-1996 ETH-Z group on surface magnetometry with synchrotron radiation, CH

1997-PRESENT APE group (INFM-TASC until 2004 then CNR-IOM) in charge of building, operating and continuously upgrading two SR beamlines for spectroscopy of surfaces and nanostructures

2011-PRESENT NFFA-Trieste group for developing an intl. facility for nanoscience

2012 PRIN-NOXSS, Grant 2012Z3N9R9, PI and coordinator of collaboration

2015-PRESENT NFFA-SPRINT group for TR spectroscopy research and HHG beamline

2015-2021 Coordinator of NFFA-Europe H2020 research infrastructure

2021-2026 Coordinator of NFFA-Europe-PILOT (NEP) H2020 research infrastructure PILOT

2022 initiator of PNRR Project NFFA-Digital Infrastructure (funded); responsible of investment budget WP4 (30 M€)

MAJOR RESPONSIBILITIES IN INTERNATIONAL RESEARCH ORGANIZATIONS, MANAGER/EVALUATOR

2001-2011 Member of SAC of the ESRF Grenoble FR

2007-2014 Member, appointed by MIUR, of Italian Delegation to FP7 Programme Committee Res. Infr.

2008-2014 Member of the Governing Board of Elettra-Sincrotrone Trieste S.c.p.A

2008-2015 Member, appointed by MIUR, of the Governing Board of the Intel. School SISSA Trieste

2009-2018 Italian Delegate to ESFRI

2009-2016 Italian Delegate to the ERIC Committee

2010- Expert of “Ministry of Education, Youth and Sports” for Research Infrastructures of Czech Republic
2011-PRESENT Senior Official representing Italy in GSO of G8+5 on Global Research Infrastructures
2012 Member of the Special Committee for the Future of ESRF
2012 PI FP7 project EXSTASY Experimental Station for the Analysis of the Spin Dynamics, N.PIIF-GA-2012-326641 (0.255 M€)
2013-2016 Member (elected) of the Executive Board of ESFRI, Chair of the Physical Science and Engineering Strategy Working Group of ESFRI and Vice-Chair (elected) of ESFRI
2013-PRESENT Member of the Sci. Comm. Labex NanoSaclay (Univ. Paris-Saclay) for Tech. Transfer
2014 Expert evaluator of “Physical Sciences and Engineering” projects of Nat. Roadmap of Rep. of Bulgaria
2014 Chair of the GSO
2015-2018 Chair elected of ESFRI (2-years mandate + extension)
2015 Expert of Academy of Finland for “FIRI 2015 Research Infrastructure Funding Calls”
2016-2018 Member of the Steering Board of ERAC
2017 Chair of GSO
2018-2019 Chair of the High-Level Expert Group on the Sustainability and European Funding EC-RTD
2018 Chair of the Commissione PON Infrastrutture - MIUR
2018-2020 Italian representative in the Gov. Board of EOSC - MIUR
2019-2020 Coordinator of Piano Nazionale Scienza Aperta, MIUR - MUR
2021 Expert of “Ministry of Education, Youth and Sports” for Res. Infrastructures of Czech Republic
2021 Vice-Chair of Academy of Finland for “FIRI 2021 Research Infrastructure Funding Calls”
2023 Expert evaluator for ESFRI Landmark assessment

PI ITALIAN RESEARCH GROUPS/GRANTS COORDINATION

1987-1989 PI Grant CEE ST2J-0333-C SCIENCE (twinning LURE-CNRS-Univ. Modena)
1990 – 1993 PI FNS-CH Grant n. 28074 - KCHF 280 for Res. on Surface Magnetism with SP electrons - ETH-Zurich
1996-2000 PI INFM Grant 2.5 M€; Elettra 0.6 M€; ETH-Z 0.6 M€, Univ. Zurich, CNRS for design and construction of APE – INFM beamline at Elettra in Trieste
2000 local PI UniMo PRIN 2000: MM02578118_003 Construction electron optics for SEMPA (PI F. Parmigiani – Univ Catt Brescia)
2004 local PI UniMoRE PRIN 2004020258_003: Fine Analysis, Modelling, and Computation of Organic/Inorganic Interfaces (PI M.G. Betti, Univ Roma Sapienza)
2007 local PI UniMoRE PRIN 2007X49B49_004: Analisi degli stati elettronici di molecole organometalliche (PI MG Betti, Univ Roma Sapienza)
2008-2010 PI FP7-RI Design Study NFFA (Nano Foundries and Fine Analysis)-GA 212348-1.8 M€
<http://nffa.tasc.infm.it>
2010 PI project for MIUR-Grandi infrastrutture di ricerca nazionali di livello paneuropeo: Codice: ROAD07XXXX Nanoscience Foundries and Fine Analysis – www.Trieste.NFFA.eu
2010 PI project for MIUR-Grandi infrastrutture di ricerca nazionali di livello paneuropeo: Codice: ROAD07BS44 - Titolo: X-FEL Italian Instrumentation
2010 PI project for MIUR-Grandi infrastrutture di ricerca nazionali di livello paneuropeo: Codice: ROAD07XAM4 - Titolo: ESRF – UPGRADE PROGRAMME
2012 National Coordinator PRIN 2012 NOXSS, Grant 2012Z3N9R9 (0.454 M€)
2015-2021 Coordinator of H2020 NFFA-Europe RIA Grant (11.7 M€), 18 EU + 2 CH partners, www.NFFA.eu
2017 member of the editorial board of the project MARIX for a two-way FEL source optimised for spectroscopy
2016-2019 H2020 WP2 Responsible (Unimi) for StR-ESFRI SA 0.9 M€, ESFRI Roadmap, 4 Eu partners
2017- National Coordinator PRIN FESTA, APPROVED but NOT financed
2019-2022 H2020 WP2 Responsible (Unimi) for StR-ESFRI-II SA 0.6 M€, ESFRI Roadmap, 5 Eu partners
2021-2024 Coordinator of WP3 of RITRAIN-Plus Horizon Europe project on training of RI Managers (Course on Life-Cycle of RIs)
2022 Coordinator of PNRR Proposal NFFA-Digital Infrastructure

NATIONAL AND INTERNATIONAL ACKNOWLEDGMENTS AND RESPONSABILITIES

Nat. - Elected Member of Executive Board INFM 2000-2004

Nat. - Elected Director of National Laboratory TASC of INFN in 2000, re-elected 2003, extended until 2009
 Inter. - Nominated Member Scientific Advisory Committee of ESRF 2001-2010, and ESRF Review Committee SI (Surfaces and Interfaces)
 Inter. - Nominated Member of Review Committee HE (hard condensed matter-electronic structure) of ESRF (2003-2010)
 Nat. - Nominated Member of Italian Delegation to FP7 Research Infrastructure, 2007-2014
 Nat. - Nominated Italian Delegate to ERIC (European Research Infrastructure Consortium) Management Board (2009, resigned in 2016)
 Eur. - Elected member Executive Board ESFRI (2012)
 Inter. - Chair GSO 2014
 Eur. - Elected Vice Chair ESFRI (2014)
 Eur. - Elected Chair ESFRI PSE Strategy Work Group (2014)
 Eur. - Member of EGI advisory steering board
 Eur. - Elected Chair of ESFRI 2015 & elected for Chair mandate extension 2018
 Eur. - Member of ERAC Steering Board since 2015
 Inter. - Chair GSO 2017
 Eur. - Chair of HLEG on Long Term Sustainability of Research Infrastructures (2018-2019)
 Nat. - Nominated Italian Member of Governing Board of European Open Science Cloud
 Inter. – referee for high impact journals since 1982
 Eur. Elected alternate co-chair of EOSC Steering Board 2021
 Eur. Elected co-chair of EOSC-SB Committee
 Eur. Elected co-chair of EOSC SB Policy subgroup
 IT member of ITA-SIGRE (Security and Integrity of the Global Research Ecosystem) G7-Science (2023-)

AREAS OF SCIENTIFIC ACTIVITY

The impact of the research of GR in the domain of surface physics and nanoscience is threefold:

- 1) Methodological effort to address surface and interface electronic, magnetic and dynamical properties with results based on original experiments and interpretation.
- 2) Design and development of novel analytical high-performance instrumentation and its integration to realize unique facilities to support advanced research group and users
- 3) Implementation of a European integrated research infrastructure for materials synthesis, characterization, fine analysis, numerical simulations as a high-level unique service in Europe.

In 1980-1994 GR was research associate at Stanford University (Spicer-Lindau group) carrying out pioneering work in SR spectroscopy (Cooper minimum filtered DOS of interfaces, XAS/SEXAFS on metal/semiconductor interfaces with EXXON -Stohr- and Bell.Labs.-Citrin) In 1984@CEA-Saclay to set up the first hard-X SEXAFS instrument in Europe. Results on RCP-amorphous ultrathin 3d ferromagnets. In 1985 Doctorat d'Etat es Sciences Physiques in 1985 @P.M. Curie Univ. Paris; CNRS Chargé de Recherche 1-ere classe at LURE lab. Results on resonant PES of RE and atomic structure of metal/semicond. interfaces. 1987, set-up of soft-X beamline @SuperACO storage ring. Establish own group. 1988-1996 part-time @ETH-Zürich, Festkörperphysik (Siegmann). Time resolved surface magnetometry with Mott polarimetry; Linear Magnetic Dichroism in the Angular Distribution of photoelectrons and its interpretation. First measurement of the surface spin moment of Fe; first time-resolved (TR) M-reversal @pump (H-field) probe (SR pulse) conditions. 1995 Associate Professor FIS01 Univ. of Modena; PI of INFN grant for the design and construction of the APE beamlines at Elettra. GR created the APE group and built an innovative laboratory based on zig-zag twin Apple-II variable polarization undulator beamlines for spectroscopy. APE's unique set-up of high-performance interconnected spectrometers and sample facilities initiated the NFFA facility. 3D Fermiology: e.g. the spill-over from bulk to surface states in Be(0001), magnetic dichroism at 3d surfaces. XMCD, PES, vectorial Mott Polarimetry results on surface magnetism. 2000, Director@Lab. Naz. TASC-INFN, member of INFN Executive Board with responsibility of LSF and personnel. Reorientation of TASC to nanoscience: upgraded facilities + 5 new beamlines on Elettra. 2004, design of the new institute IOM@CNR. Coordination of FP7 and H2020 EC grants leading to www.Trieste.NFFA.eu and www.NFFA.eu. 2011 Full Professor of Physics of Matter FIS03@Dipartimento di Fisica, Univ. of Milano. NFFA-APE laboratory expansion with design/construction of VLEED-type spin polarimeters for SARPES@APE, in-situ UHV PLD-Foundry, Laser-HHG-XUV SPRINT beamline for 100fs/200KHz TR optical, ARPES, Spin Polarimetry, Raman, Transient Grating spectroscopy and magnetometry. Results, e.g. spin polarization of Dirac cone states on Bi2Se3, record resolution of TR ARPES. Coordination of the NFFA-APE research group of 30 (including PhD and post.docs) engaged in the study of

topological properties of matter, on surface and interface ferromagnetism and multiferroism, on the dynamics of ferromagnetism and, as a spin-off activity of the group, to the ambient pressure XAS/XMCD for in-operando catalysis. Instrumentation development by the group include VLEED polarimeters, time-resolved Mott polarimetry, Transient Grating, Time Resolved UHV Raman, ambient pressure cells for UHV beamlines. Construction of new MiMAG laboratory at Università di Milano with key instruments provided by emeritus Prof. Pesca of ETH-Zurich. I was the initiator of the MARIX proposal for a FEL source optimised for spectroscopy that developed the concept of a dual-pass SC linac and arc compressor as a possible facility (L. Serafini et al. 2019). I was the initiator of the project for a common platform of shared instrumentation for the new science campus of University of Milano on the site of EXPO-2015.

GR is a user of SR and FEL sources worldwide. (fs X-ray diffraction of nano-clusters at SACLA). Without discontinuity of research and teaching duties GR serves science policy and organization at national, European and global level.

GR teaches undergraduate and graduate university physics courses since 1995. I have directed dozens of PhD and Master thesis.

I am author or co-author of >265 publications in international peer-reviewed journals of high impact (7 Nature Publ.Group, 15 Phys.Rev.Lett, 60 Phys.Rev.B);

H=41, I10 = 129, CITATIONS >6200, (GOOGLE SCHOLAR). DEGREE OF SUCCESS AS PI: INTERNATIONAL=90% (10 APPLICATIONS); NATIONAL 71% (7 APPLICATIONS)

Milano, March, 12th 2023

Giorgio Rossi

L'originale compilato e
sottoscritto è depositato
presso gli Uffici dell'Ente

ATTACHEMENT

Selection of publications from last 5 years of research activity of Giorgio Rossi:

209. *X-ray magnetic circular dichroism discloses surface spin correlation in maghemite hollow nanoparticles.* V. Bonanni, M. Basini, D. Peddis, A. Lascialfari, G. Rossi and P. Torelli. **Appl. Phys. Lett.** **112**, 022404 (2018); <https://doi.org/10.1063/1.5006153>
210. *Strain-induced magnetization control in an oxide multiferroic heterostructure.* Federico Motti, G. Vinai, A. Petrov, B. A. Davidson, B. Gobaut, A. Filippetti, G. Rossi, G. Panaccione, P. Torelli. **Phys. Rev. B**, vol. 97, 094423, ISSN: 2469-9950, doi: 10.1103/PhysRevB.97.094423
211. *Revealing spin-orbit coupling signatures in the electronic structure of IrO₂* P. K. Das, J. Sławińska, I. Vobornik, J. Fujii, A. Regoutz, J. M. Kahk, D. O. Scanlon, B. J. Morgan, C. McGuinness, G. Rossi, E. Plekhanov, D. Di Sante, S. Picozzi, Y. S. Huang, W. R. Branford, G. Panaccione, D. J. Payne; **Phys. Rev. Materials**, vol. 2, p. 065001-1-065001-7, ISSN: 2475-9953, doi: 10.1103/PhysRevMaterials.2.065001 (2018)
212. *A reaction cell for ambient pressure soft x-ray absorption spectroscopy.* C. Castán-Guerrero, D. Krizmancic, V. Bonanni, R. Edla, A. Deluisa, F. Salvador, G. Rossi, G. Panaccione, P. Torelli; **Review of Scientific Instruments**, vol. 89, p. 054101-1-054101-9, ISSN: 0034-6748, 10.1063/1.5019333 (2018)
213. *Ultrafast Structural Dynamics of nanoparticles in Intense Laser Fields.* Toshiyuki Nishiyama, Yoshiaki Kumagai, Akinobu Niozu, Hironobu Fukuzawa, Koji Motomura, Max Bucher, Yuta Ito, Tsukasa Takanashi, Kazuki Asa, Yuhiro Sato, Daehyun You, Yiwen Li, Taishi Ono, Edwin Kukk, Catalin Miron, Liviu Neagu, Carlo Callegari, Michele Di Fraia, Giorgio Rossi, Davide E. Galli, Tommaso Pincelli, Alessandro Colombo, Takashi Kameshima, Yasumasa Joti, Takaki Hatsui, Shigeki Owada, Tetsuo Katayama, Tadashi Togashi, Kensuke Tono, Makina Yabashi, Kazuhiro Matsuda, Christoph Bostedt, Kiyonobu Nagaya, and Kiyoshi Ueda (2019). **Physical Review Letters**, 123 123201 (2019) ISSN: 0031-9007. 10.1103/PhysRevLett.123.123201
214. *Transient quantum isolation and critical behavior in the magnetization dynamics of half-metallic manganites.* Tommaso Pincelli, Riccardo Cucini, Adriano Verna, Francesco Borgatti, Masaki Oura, Kenji Tamasaku, Tien-lin Lee, Christoph Schlueter, Stefan Günther, Christian Horst Back, Martina Dell'Angela, Roberta Ciprian, Pasquale Orgiani, Aleksandr Petrov, Fausto Sirotti, Valentin Dediu, Ilaria Bergenti, Patrizio Graziosi, Fabio Miletto Granozio, Yoshihito Tanaka, Munetaka Taguchi, Hiroshi Daimon, Jun Fujii, Giorgio Rossi, Giancarlo Panaccione (2019). **Physical Review B**, vol. 100, p. 1-11, ISSN: 2469-9969, doi: 10.1103/PhysRevB.100.045118
215. *Study of Gaseous Interactions on Co₃O₄ Thin Film Coatings by Ambient Pressure Soft X-ray Absorption Spectroscopy.* Raju Edla,*, †Luca Braglia, †Valentina Bonanni, †, ‡Antonio Miotello, §Giorgio Rossi, †, ‡and Piero Torelli; **Journal of Physical Chemistry C** 2019, 123, 40, 24511-24519; [10.1021/acs.jpcc.9b05433](https://doi.org/10.1021/acs.jpcc.9b05433)
216. *C. Robustness of topological states in Bi₂Se₃ thin film grown by Pulsed Laser Deposition on (001)-oriented SrTiO₃ perovskite.* Bigi, P. Orgiani, NARDI, ANDREA, A. Troglia, J. Fujii, G. Panaccione, I. Vobornik, G. Rossi (2019). **Applied Surface Science**, vol. 473, p. 190-193, ISSN: 0169-4332, doi: 10.1016/j.apsusc.2018.12.119
217. *Reversible Modification of Ferromagnetism through Electrically Controlled Morphology*

Giovanni Vinai,* Federico Motti, Valentina Bonanni, Aleksander Yu. Petrov, Stefania Benedetti, Christian Rinaldi, Mattia Stella, Damiano Cassese, Stefano Prato, Matteo Cantoni, Giorgio Rossi, Giancarlo Panaccione, and Piero Torelli. **Advanced Electronic Materials** 2019, 1900150; DOI: 10.1002/aelm.201900150

218. *Research infrastructures as a key optimizer of European research.*
Giorgio Rossi (2019). **EUROPHYSICS NEWS**, vol. 50, p. 14-18, ISSN: 0531-7479, doi: 10.1051/e pn/2019101
219. *MariX, an advanced MHz-class repetition rate X-ray source for linear regime time-resolved spectroscopy and photon scattering.*
L. Serafini, A. Bacci, A. Bellandi, M. Bertucci, M. Bolognesi, A. Bosotti, F. Broggi, R. Calandrino, F. Camera, F. Canella, S. Capra, P. Cardarelli, M. Carrara, K. Cassou, A. Castoldi, R. Castriconi, G. M. Cattaneo, S. Cialdi, A. Cianchi, N. Coluccelli, C. Curatolo, A. Del Vecchio, S. Di Mitri, I. Drebot, K. Dupraz, A. Esposito, L. Faillace, M. Ferrario, C. Fiorini, G. Galzerano, M. Gambaccini, G. Ghiringhelli, D. Giannotti, D. Giove, F. Groppi, C. Guazzoni, P. Laporta, S. Leoni, A. Loria, P. Mangili, A. Martens, T. Mazza, Z. Mazzotta, C. Meroni, G. Mettievier, P. Michelato, L. Monaco, S. Morante, M. Moretti Sala, D. Nutarelli, S. Olivares, G. Onida, M. Opromolla, C. Pagani, R. Paparella, M. G. A. Paris, B. Paroli, G. Paternò, C. Paulin, L. Perini, M. Petrarca, V. Petrillo, E. Pinotti, P. Piseri, M. A. C. Potenza, F. Prelz, A. Pullia, E. Puppini, F. Ragusa, R. Ramponi, M. Romè, M. Rossetti Conti, A. R. Rossi, L. Rossi, M. Ruijter, P. Russo, S. Samsam, A. Sarno, D. Sertore, M. Sorbi, B. Spataro, M. Statera, F. Stellato, E. Suerra, A. Tagliaferri, A. Taibi, V. Torri, G. Turchetti, C. Vaccarezza, R. Valdagni, A. Vanzulli, F. Zomer, G. Rossi (2019).
NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH. SECTION A, ACCELERATORS, SPECTROMETERS, DETECTORS AND ASSOCIATED EQUIPMENT, vol. 930, p. 167-172, ISSN: 0168-9002, doi: 10.1016/j.nima.2019.03.096
220. *High Repetition Rate and Coherent Free-Electron Laser in the X-Rays Range Tailored for Linear Spectroscopy.* Vittoria Petrillo, Michele Opromolla, Alberto Bacci, Illya Drebot, Giacomo Ghiringhelli, Alberto Petralia, Ezio Puppini, Marcello Rossetti Conti, Andrea Renato Rossi, Alberto Tagliaferri, Sanae Samsam, and Luca Serafini, Giorgio Rossi (2019).
INSTRUMENTS, vol. 3, 47, ISSN: 2410-390X, doi: 10.3390/instruments3030047
221. *Electronic properties of candidate type-II Weyl semimetal WTe₂ : A review perspective.*
P. K. Das, D. Di Sante, F. Cilento, C. Bigi, D. Kopic, D. Soranzio, A. Sterzi, J. A. Krieger, I. Vobornik, J. Fujii, T. Okuda, V. N. Strocov, M. B. H. Breese, F. Parmigiani, G. Rossi, S. Picozzi, R. Thomale, G. Sangiovanni, R. J. Cava, G. Panaccione (2019).
ELECTRONIC STRUCTURE, p. 1-18, ISSN: 2516-1075, doi: 10.1088/2516-1075/ab0835
222. *Two-pass two-way acceleration in a superconducting continuous wave linac to drive low jitter x-ray free electron lasers.*
A. Bacci ,1,*M. Rossetti Conti ,1A. Bosotti,1S. Cialdi,2,1S. Di Mitri ,3I. Drebot,1L. Faillace,1G. Ghiringhelli,4P. Michelato,1L. Monaco,1M. Opromolla,1,2R. Paparella,1V. Petrillo,1,2M. Placidi,5E. Puppini,1,4A. R. Rossi,1G. Rossi,2D. Sertore,1and L. Serafini; **Physical Review AB** **22**, 111304 (2019)
- 223 *Reversible Modification of Ferromagnetism through Electrically Controlled Morphology*
Giovanni Vinai,* Federico Motti, Valentina Bonanni, Aleksander Yu. Petrov, Stefania Benedetti, Christian Rinaldi, Mattia Stella, Damiano Cassese, Stefano Prato, Matteo Cantoni, Giorgio Rossi, Giancarlo Panaccione, and Piero Torelli
Advanced Electronic Materials 2019, 1900150; DOI: 10.1002/aelm.201900150
- 224 *Proximity-induced ferromagnetism and chemical reactivity in few-layer VSe₂ heterostructures*
G. Vinai, C. Bigi, A. Rajan, M. D. Watson, T.-L. Lee, F. Mazzola, Modesti, S. Barua, M. Ciomaga Hatnean, G. Balakrishnan, P. D. C. King, P. Torelli, G. Rossi, and G. Panaccione
Physical Review B **101**, 035404 (2020)
- 225 *Coherent Narrowband Light Source for Ultrafast Photoelectron Spectroscopy in the 17-31 eV Photon Energy Range.*

Riccardo Cucini,1, a) Tommaso Pincelli,1 Giancarlo Panaccione,1 Damir Kopic,2, 3 Fabio Frassetto,4 Paolo Miotti,4, 5 Gian Marco Pierantozzi,1 Simone Peli,2 Andrea Fondacaro,1 Aleksander De Luisa,1 Alessandro De Vita, Pietro Carrara, Damjan Krizmancic, Daniel T. Payne, Federico Salvador, Andrea Sterzi, Luca Poletto, Fulvio Parmigiani, Giorgio Rossi and Federico Cilento
Structural Dynamics, 2020

226. *An integrated ultra-high vacuum apparatus for growth and in situ characterization of complex materials.* Giovanni Vinai, Federico Motti, Aleksandr Petrov, Vincent Polewczyk, Valentina Bonanni, Raju Edla, Benoit Gobaut, Jun Fujii, Fabio Suran, Davide Benedetti, Federico Salvador, Andrea Fondacaro, Giorgio Rossi, Giancarlo Panaccione, Bruce Davidson, and Piero Torelli (2020). **REVIEW OF SCIENTIFIC INSTRUMENTS**, vol. 91, 085109, ISSN: 0034-6748, doi: 10.1063/5.0005302
227. *Analysis of Metal-Insulator Crossover in Strained {SrRuO}3 Thin Films by X-ray Photoelectron Spectroscopy.* Andrea Nardi, Chiara Bigi, Sandeep Kumar Chaluvadi, Regina Ciancio, Jun Fujii, Ivana Vobornik, Giancarlo Panaccione, Giorgio Rossi, Pasquale Orgiani (2020). **COATINGS**, vol. 10, 780, ISSN: 2079-6412, doi: 10.3390/coatings10080780
228. *Characterizing crystalline defects in single nanoparticles from angular correlations of single-shot diffracted X-rays.* Akinobu Niozu*, Yoshiaki Kumagai, Toshiyuki Nishiyama, Hironobu Fukuzawa, Koji Motomura, Max Bucher, Kazuki Asa, Yuhiro Sato, Yuta Ito, Tsukasa Takanashi, Daehyun You, Taishi Ono, Yiwen Li, Edwin Kukk, Catalin Miron, Liviu Neagu, Carlo Callegari, Michele Di Fraia, Giorgio Rossi, Davide E. Galli, Tommaso Pincelli, Alessandro Colombo, Shigeki Owada, Kensuke Tono, Takashi Kameshima, Yasumasa Joti, Tetsuo Katayama, Tadashi Togashi, Makina Yabashi, Kazuhiro Matsuda, Kiyonobu Nagaya, Christoph Bostedt, and Kiyoshi Ueda (2020). **IUCRJ**, vol. 7, p. 276-286, ISSN: 2052-2525, doi: 10.1107/S205225252000144X
229. *Direct insight into the band structure of SrNbO3.* Chiara Bigi, Pasquale Orgiani, Jagoda Sławinska, Jun Fujii, John T. Irvine, Silvia Picozzi, Giancarlo Panaccione, Ivana Vobornik, Giorgio Rossi, David Payne, Francesco Borgatti (2020). **PHYSICAL REVIEW MATERIALS**, vol. 4, 025006, ISSN: 2475-9953, doi: 10.1103/PhysRevMaterials.4.025006
230. *Distinct behaviour of localised and delocalised carriers in anatase TiO2 (001) during reaction with O2.* Chiara Bigi, Zhenkun Tang, Gian Marco Pierantozzi, Pasquale Orgiani, Pranab Kumar Das, Jun Fujii, Ivana Vobornik, Tommaso Pincelli, Alessandro Troglia, Tien-Lin Lee, Regina Ciancio, Goran Drazic, Alberto Verdini, Anna Regoutz, Phil D. C. King, Deepnarayan Biswas, Giorgio Rossi, Giancarlo Panaccione, Annabella Selloni (2020). **PHYSICAL REVIEW MATERIALS**, vol. 4, p. 1-9, ISSN: 2475-9953, doi: 10.1103/PhysRevMaterials.4.025801
231. *Interplay between morphology and magnetoelectric coupling in Fe/PMN-PT multiferroic heterostructures studied by microscopy techniques.* Federico Motti, Giovanni Vinai, Valentina Bonanni, Vincent Polewczyk, Paola Mantegazza, Thomas Forrest, Francesco Maccherozzi, Stefania Benedetti, Christian Rinaldi, Matteo Cantoni, Damiano Cassese, Stefano Prato, Sarnjeet S. Dhesi, Giorgio Rossi, Giancarlo Panaccione, Piero Torelli (2020). **PHYSICAL REVIEW MATERIALS**, vol. 4, p. 114418-1-114418-11, ISSN: 2475-9953, doi: 10.1103/PhysRevMaterials.00.004400
232. *Original design of a patterned multiferroic heterostructure for electrical control of the magnetic shape anisotropy.* V. Polewczyk, G. Vinai, F. Motti, S. Dal Zilio, P. Capaldo, M. Sygletou, S. Benedetti, G. Rossi, P. Torelli. **JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS**, vol. 507, 166816, (2020) ISSN: 0304-8853, doi: 10.1016/j.jmmm.2020.166816

233. *Predominance of z²-orbitals at the surface of hole- and electron-doped manganites probed by Angle-Resolved Photo-Emission Spectroscopy.*
C. Bigi, S. Kumar Chaluvadi, A. Galdi, L. Maritato, C. Aruta, R. Ciancio, J. Fujii, B. Gobaut, P. Torelli, I. Vobornik, G. Panaccione, G. Rossi, P. Orgiani (2020).
JOURNAL OF ELECTRON SPECTROSCOPY AND RELATED PHENOMENA, ISSN: 0368-2048,
doi: 10.1016/j.elspec.2020.147016
234. *Thermal assisted tailoring of magnetic coercivity in Iron thin films on unstable Lithium Niobate substrate.*
Vincent POLEWCZYK, Giovanni Vinai, Federico Motti, Sandra Santhosh, Stefania Benedetti, Giorgio Rossi, Piero Torelli (2020).
JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, vol. 515, 167257, ISSN: 0304-8853,
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