Salvatore
Macis

europass

WORK EXPERIENCE

01/05/2021 – 30/04/2022 – Rome, Italy

Post-Doc Position

University of La Sapienza

Post-Doc Position on the project "*Proprietà Elettromagnetiche lineari e non lineari di materiali topologici Weyl e Dirac*"

01/03/2020 – CURRENT – Rome, Italy

Post-Doc Position

University of La Sapienza

Post-Doc Position on the project "*Transition Metal Oxides for Technological Applications*"

01/07/2019 – 31/12/2020 – Rome, Italy

Research scholarship

University of La Sapienza

Research scholarship on the project "*Spettroscopia THz lineare, non lineare e risolta in tempo con sorgenti di radiazione di ultima generazione*"

EDUCATION AND TRAINING

01/11/2015 – 11/03/2019 – Via della Ricerca Scientifica 1, Rome, Italy

PhD in Physics, Eccellente qualità con Lode

Tor Vergata University

11/10/2013 – 20/10/2015 – Via della Vasca Navale 84, Rome, Italy

Master Degree in Physics, 110/110

Roma Tre University

01/10/2010 – 10/10/2013 – Via della Vasca Navale 84, Rome, Italy

Bachelor Degree in Physics, 110/110 e Lode

Roma Tre University

2005 – 2010 – Via delle Carine 1, Rome, Italy

Scientific High School Diploma

Liceo Scientifico Cavour

PUBLICATIONS

Disordered Photonics Behavior from Terahertz to Ultraviolet of a 3-Dimensional Graphene Network

2021
L. Tomarchio, S. Macis, A. Grilli, M. Romani, M. Cestelli Guidi, K. Hu, S. Kukunuri, S. Jeong, A. Marcelli, Y. Ito, and S. Lupi, *Nature Asia*, Submitted, March 2021

Structural anisotropy in three dimensional macroporous graphene: A polarized XANES investigation

2021
S.J. Rezvani, A. D'Elia, S. Macis, S. Nannarone, S. Lupi, F. Schütt, F. Rasch, R. Adelung, B. Lu, Z Zhang, L. Qu, X. Feng, A. Romani Vázquez, A. Marcelli, *Diamond and Related Materials,* **111**(1), **108171**, January 2021

A novel approach for green synthesis of WO3 nanomaterials and their highly selective chemical sensing properties

2020
V. Galstyan, N. Poli, A. D'Arco, S. Macis, S. Lupi and E. Comini, *Journal of Materials Chemistry A*, **8**, **20373-20385**, August 2020

Spatially Resolved Spectral Imaging by A THz-FEL

2020
A. Irizawa, M. Fujimoto, K. Kawase, R. Kato, H. Fujiwara, A. Higashiya, S. Macis, L. Tomarchio, S. Lupi, A. Marcelli and S. Suga, *Special Issue THz: Research Frontiers for New Sources, Imaging and Other Advanced Technologies, Condensed Matter*, **5**(2), **38**, June 2020

Angular dependence of copper surface damage induced by an intense coherent THz radiation beam

2020
S. Macis, L. Tomarchio, S. Tofani, J. Rezvani, L. Faillace, S. Lupi, A. Irizawa and A. Marcelli, *Special Issue THz: Research Frontiers for New Sources, Imaging and Other Advanced Technologies, Condens. Matter*, **5**(1), **16**, March 2020

Interplay among Work Function, electronic structure and stoichiometry in nanostructured vanadium oxides films

2020
A. D'Elia, C. Cepek, M. de Simone, S. Macis, B. Belec, M. Fanetti, P. Piseri, A. Marcelli, M. Coreno, *Physical Chemistry Chemical Physics*, **22**, **6282-6290**, February 2020

Characterization of CdS sputtering deposition on Low Temperature Pulsed Electron Deposition Cu(In, Ga)Se2 solar cells

2020
M. Miliucci, M. Lucci, I. Colantoni, F. De Matteis, F. Micciulla, A. Clozza, S. Macis, I. Davoli, *Thin Solid Films*, **697**, **137833**, January 2020

Molybdenum Oxides Coatings for High Demanding Accelerator Components

2019
J. Scifo, A. Marcelli, B. Spataro, D. Hampai, S. Dabagov, S. Sarti, A. Di Trolio, R. Moscatelli, S. Macis, L. Faillace, *Instruments* **3** (4), **61** December 2019

Synchrotron radiation research and analysis of the particulate matter in deep ice cores: an overview of the technical challenges

2019
G.Cibin, A. Marcelli, V. Maggi, G. Baccolo, D. Hampai, P. E. Robbins, A. Liedl, C. Polese, A. D'Elia, S. Macis, A. Grilli, A. Raco, *Condensed matter*, **4**, **61**, June 2019

Structural Evolution of MoO3 Thin Films Deposited on Copper Substrates upon Annealing: An X-ray Absorption Spectroscopy Study

2019
S. Macis, J. Rezvani, I. Davoli, G. Cibin, B. Spataro, J. Scifo, L. Faillace and A. Marcelli, *Condensed Matter*, **4**(2) **41**, April 2019

The Potential of EuPRAXIA@SPARC_LAB for Radiation Based Techniques

2019
A. Balerna, S. Bartocci, G. Batignani, A. Cianchi, E. Chiadroni, M. Coreno, A. Cricenti, S. Dabagov, A. Di Cicco, M. Faiferri, C. Ferrante, M. Ferrario, G. Fumero, L. Giannessi, R. Gunnella, J. José Leani, S. Lupi, S. Macis, R. Manca, A. Marcelli, C. Masciovecchio, M. Minicucci, S. Morante, E. Perfetto, M. Petrarca, F. Pusceddu, J. Rezvani, J. I. Robledo, G. Rossi, H. J. Sanchez, T. Scopigno, G. Stefanucci, F. Stellato, A. Trapananti and F. Villa, *Condensed Matter*, **4**(1), **30**, April 2019

MoO3 films grown on polycrystalline Cu: morphological, structural and electronic properties

2019
S. Macis, C. Aramo, C. Bonavolontà, G. Cibin, A. D'Elia, I. Davoli, M. De Lucia, M. Lucci, S. Lupi, M. Miliucci, A. Notargiacomo, C. Ottaviani, C. Quaresima, M. Scarselli, J. Scifo, B. Spataro, M. Valentino, P. De Padova and A. Marcelli, *Journal of Vacuum Science and Technology A*, **37**, **021513**, March 2019

Accurate Fe3+ / Fetot ratio from XAS spectra at the Fe K-edge

2018
F. Galdenzi, A. Marcelli, G. Della Ventura, G. Cibin, S. Macis, A. Marcelli, *R adiation Physics and Chemistry*, **175**, **108088**, December 2018

The Contribution of Synchrotron Light for the Characterization of Atmospheric Mineral Dust in Deep Ice Cores: Preliminary Results from the Talos Dome Ice Core (East Antarctica)

2018
G. Baccolo, G. Cibin, B. Delmonte, D. Hampai, A. Marcelli, E. Di Stefano, S. Macis and V. Maggi, *Condensed Matter*, **3**(3), **25,** August 2018

Iron oxidation dynamics vs. temperature of synthetic potassic-ferro-richterite: A XANES investigation

2018
G. Della Ventura, F. Galdenzi, G. Cibin, R. Oberti, W. Xu, S. Macis and A. Marcelli, *Physical Chemistry Chemical Physics,* **20**(33), **21764-21771** August 2018

Shungite Carbon as Unexpected Natural Source of Few-Layer Graphene Platelets in a Low Oxidation State

2018
E. Tamburri, R. Carcione, S. Politi, M. Angjellari, L. Lazzarini, L.E. Vanzetti, S. Macis, G. Pepponi and M.L. Terranova, *Inorganic Chemistry*, **57**(14), **848 7–8498**, July 2018

Microdrop deposition technique: preparation and characterization of diluted suspended particulate samples

2018
S. Macis, G. Cibin, V. Maggi, G. Baccolo, D. Hampai, B. Delmonte, A. D'Elia and A. Marcelli, *Condensed Matter*, **3**(3), **21**, July 2018

Exploiting the Properties of Ti-Doped CVD-Grown Diamonds for the Assembling of Electrodes

2017
E. Tamburri, R. Carcione, F. Vitale, A. Valguarnera, S. Macis, M. Lucci, M.L. Terranova, *Advanced Materials Interfaces,* **4**(18), **1700222**, May

2017

PROCEEDINGS

2018

Imaging local strain spatial fluctuations in superconducting BaPb1-xBixO3 by scanning micro-XANES

R. Albertini, S. Macis, G. Campi, A. Marcelli, A. A. Ivanov, A. Menushenkov, J. Purans, P. Giraldo Gallo, T.H. Geballe, I.R. Fisher, A. Bianconi, QUANTUM COMPLEX MATTER Publisher: Superstripes Press ISBN: 9788866830900, August 2018

2018

Deposition and characterization of MoO3 films on copper to improve accelerating technologies

S. Macis, A. Marcelli, QUANTUM COMPLEX MATTER Publisher: Superstripes Press ISBN: 9788866830900, August 2018

2017

Identification of sources of iron in mineral dust (aerosol) from Western China, Arctic and East Antarctica regions by chemical speciation using X-ray absorption near-edge structure (XANES) spectroscopy, in: Aerosols in snow and ice

Z. Du, C. Xiao, A. Marcelli, G. Cibin, G. Baccolo, S. Macis, W. Xu, A. Puri, V. Maggi, S. Liu, Y. Zhu, Markers of environmental pollution and climatic changes: European and Asian perspectives, Publisher: Superstripes Press, Rome, Italy, ISBN 9788866830771, September 2017

2017

Mapping by scanning micro XANES (SμXANES) of intrinsic spatial local inhomogeneity in superconducting BaPb1−xBixO3

R. Albertini, S. Macis, G. Campi, A. Ivanov, V. Ivanov, A. Marcelli and A. Bianconi, Superstripes, June 2017

2016

Microdrop deposition technique: preparation and characterization of ultradiluted samples

S. Macis, G. Cibin and A. Marcelli, Atomically Controlled Surfaces, Interfaces and Nanostructures, Publisher: Superstripes Press, Rome, Italy, ISBN: 9788866830597, October 2016

2015

Microdrop deposition for ultra-diluted samples preparation

S. Macis, G. Cibin and A. Marcelli, Nanoscale excitations in emergent materials; NEEM 2015, Publisher: Superstripes Press, Rome, Italy, ISBN: 9788866830450, November 2015

2015

Oxidation processes of Fe- amphiboles at high temperature

A. D'Elia, S. Macis, G. Cibin, G. Della Ventura and A. Marcelli, Nanoscale excitations in emergent materials; NEEM 2015, Publisher: Superstripes Press, Rome, Italy, ISBN: 9788866830450, November 2015

BIBLIOGRAPHIC INDICATORS

04/2021

Google Scholar

Citation n. 83

H index: 6

N. Articles 17

04/2021

Web Of Science

Citation n. 54

H index: 5

N. Articles 16

ORAL CONTRIBUTIONS AT INTERNATIONAL CONFERENCES

10/12/2019 – 11/12/2019

THz to UV transmission of 3D Graphene micro structures

Spectroscopy and Imaging with THz Radiation using Ultimate radiation Sources, Rome, Italy

12/10/2019 – 13/10/2019

THz to UV transmission of 3D Graphene micro structures

The 2nd BilateralWorkshop 3D Graphene, Hefei, China

17/06/2019 – 20/06/2019

Surface damage angular dependence of metallic systems by high gradient THz radiation

Photonics and Electromagnetic Research Symposium, PIERS 2019, Rome, Italy

18/06/2019 – 21/06/2019

Thin conducting MoO3 films on copper. A new opportunity for technological applications

10th Young Researcher Meeting, Rome, Italy

21/05/2019 – 25/05/2019

Thin conducting MoO3 films on copper for technological applications

54th Zakopane School of Physics, Zakopane, Poland

17/10/2018 – 19/10/2018

X-Ray characterization of thin conducting MoO3 films on copper. A new opportunity for technological applications

High precision X-ray measurements, Frascati, Italy

22/07/2018 – 27/07/2018

Correlated disorder in BaPb1−xBixO3 superconductor

X-ray Absorption Fine Structure, XAFS 2018, Kraków, Poland

POSTERS

Thin and ultrathin conducting MoO3 films on copper: a new route for improved RF devices

ICFDT5 2018 Conference 3-5 October 2018 INFN-LNF, Italy

High electric field breakdown on MoO3-carbon nanotubes coating on copper for technological applications

Bilateral Workshop 3D Graphene, 1-2 October 2018 INFN-LNF & Sapienza University, Italy

Thin conductive MoO3 films on copper technologies application: AES and XAS study of electronic and structural properties

XAFS 2018, 22–27 July 2018 Kraków, Poland

Micro-XAS measures of the local structure changes in BaPb1−xBixO3 as a function of temperature

Int. Conference on Quantum Condensed Matter, QCM 2018, 11-15 June 2018, Frascati, Italy

Thin and ultrathin conducting MoO3 films on copper for technological application: a XAS study of electronic and structural properties

QCM 2018, 11-15 June 2018 INFN-LNF, Italy

Micro-XAS measures of the local structure changes in BaPb1−xBixO3 as a function of temperature

Int. Conference SUPERSTRIPES 2017, 4-10 June 2017, Ischia, Italy

Hybrid CIGS-TiO2 thin film solar cells by sol gel method

FANO PRIZE 2016, 1 November 2016 CNR Headquarters, Rome, Italy

Local refractive index variation of FIB milled CVD diamond areas via Raman and IR micro-reflectivity

ACSIN 2016, 9-15 October 2016, Rome, Italy

Microdrop deposition technique: preparation and characterization of ultradiluted samples

ACSIN 2016, 9-15 October 2016, Rome, Italy

Oxidation processes of Fe-amphiboles at high temperature

NEEM 2015, 12-14 October 2015, Rome, Italy

Microdrop deposition for ultra-diluted samples preparation

NEEM 2015, 12-14 October 2015, Rome, Italy

WORKING EXPERIENCE ABROAD

05/2019

Experiment, High electric field irradiations on MoO3/Cu and MoO3/Al samples

Osaka University, ISIR THz FEL, Osaka, Japan.

10/2018

Beamtime, ReflEXAFS study of MoO3/Cu interface for modern accelerating devices

ESRF Synchrotron, BM08 beamline, Grenoble, France.

09/2018

Experiment, High electric field irradiations on MoO3/Cu samples

Osaka University, ISIR THz FEL, Osaka, Japan.

06/2018

Experiment, High electric field irradiations on copper surfaces

Osaka University, ISIR THz FEL, Osaka, Japan.

07/2017

Beamtime, XRD studies of p-Terphenyl as a function of temperature

ELETTRA Synchrotron, XRD1 beamline , Trieste, Italy.

12/2016

Beamtime, Chemical activities of environmental pollutants in aerosols stored in snow and ice-core from the Western China and Arctic Atmosphere

ESRF Synchrotron, BM08 beamline , Grenoble, France.

09/2016

Beamtime, Probing local refractive index variation of FIB milled CVD diamond microareas via IR microreflectivity and KK transformation

Diamond Synchrotron, B18 beamline, Harwell, Oxford, UK.

06/2016

Beamtime, Local structure changes in BaPb1−xBixO3 as a function of temperature correlated with CDW onset by dispersive XAS

ESRF Synchrotron , Grenoble, France.

04/2016

Beamtime, XAFS study of structural and magnetic effects induced by intercalation on Gr/Co/Ir systems

ESRF Synchrotron, ID03 beamline, Grenoble, France.

03/2016

Beamtime, XRF study of structural and magnetic effects induced by intercalation on Gr/Co/Ir systems

ESRF Synchrotron ID03 beamline, Grenoble, France.

11/2014

Training course, Multivariate IR Microspectroscopy Analysis Training Course

Diamond Light Source Synchrotron, Oxfordshire, UK.

07/2014 – 09/2014

Research Thesis, Optimization of Microdrop setup and XRF measures

Diamond Synchrotron, B18 beamline, Harwell, Oxford, UK.

TEACHING

03/2019 – 06/2019

Assistant in Physics I, Tor Vergata Engineering faculty, 30 hours

03/2019 – 06/2019

Assistant in Physics, Tor Vergata Biology faculty, 50 hours

03/2018 – 06/2018

Assistant in Physics, Tor Vergata Biology faculty, 100 hours

10/2017 – 01/2018

Assistant in Experimental Physics 2, Tor Vergata Material Science faculty, 25 hours

03/2017 – 06/2017

Assistant in Physics, Tor Vergata Biology faculty, 100 hours

10/2016 – 01/2017

Assistant in Experimental Physics 1, Tor Vergata Material Science faculty, 100 hours

10/2016 – 01/2017

Assistant in Experimental Physics 2, Tor Vergata Material Science faculty, 30 hours

03/2016 – 06/2016

Assistant in Physics, Tor Vergata Biology faculty, 100 hours

10/2015 – 01/2016

Assistant in Experimental Physics 1, Tor Vergata Material Science faculty, 100 hours

03/2014 – 06/2014

Assistant in Data Analysis Laboratory, Roma Tre Biology faculty 50 hours

HONOURS AND AWARDS

11/2013

Scholarship – Roma Tre University
Three-months scholarship by the Roma Tre University awarded to support outstanding students during their thesis research abroad

10/2013

Scholarship – Roma Tre University
Scholarship awarded by the Roma Tre University to support outstanding students during their first year of Master's Degree

01/2013

Alte scuole Roma Tre – Roma Tre University
School of excellence, first-year participation

01/2012

Scholarship – Roma Tre University
Scholarship awarded by the Roma Tre University to support outstanding students during their second year of Bachelor's Degree

LANGUAGE SKILLS

MOTHER TONGUE(S): Italian

OTHER LANGUAGE(S):

English

Listening	Reading	Spoken production	Spoken interaction	Writing
C2	C1	C1	C1	C1

DIGITAL SKILLS

MATLAB&Simulink / COMSOL Multi-Physics / Zemax OpticStudio / OriginPro 85 / labVIEW / MS office/Latex; (Full proficiency, daily use)