

## ***Curriculum Vitae Prof. Cosimino Malitesta***

Laurea magna cum laude, Chemistry (1983), University of Bari.

PhD, Analytical Chemistry (1989), University of Bari

### **Academic positions**

- Researcher in Analytical Chemistry, Chemistry Dept., University of Basilicata (1987).

- Researcher in Analytical Chemistry, Chemistry Dept., University of Bari (1988-1992)

Associate Professor in Analytical Chemistry, Chemistry Dept. University of Bari (1992-2001)

- Full Professor in Analytical Chemistry (University of Lecce/Salento, 2001- present)

- Visiting scientist, ICL, University of Oxford (UK) (1987, 1988, 1989)

He has been Director of Research Unit of University of Bari in "Consorzio Nazionale Interuniversitario di Scienza e Tecnologia dei materiali (INSTM)", Chairman of "Centro Interdipartimentale Spettroscopie", University of Bari.

- Coordinator of a PhD Program in Chemistry and Physics, University of Salento

Since 2009 he is Chairman of Didactic Board "Environmental Sciences" of University of Salento.

### **Main research interests**

Development and application of XPS

Electrochemical biosensors and biomimetic sensors based on electrosynthesized polymers

Electrochemical techniques in Molecular Imprinting Polymerisation (MIP)

Analytical applications of nanostructures

Surface characterization of PM

### **Publications/Bibliometric parameters**

Over 110 peer-reviewed papers in international Journals, three Reviews as corresponding author, two book chapters.

Total No. of Citations=2886; Citations/paper= 27.23; H-index=28. (source WoS, accessed October 24<sup>th</sup>, 2017)

*Highly Cited Paper:* Malitesta, C; Mazzotta, E; Picca, RA; Poma, A; Chianella, I; Piletsky, SA, MIP sensors - the electrochemical approach, ANALYTICAL AND BIOANALYTICAL CHEMISTRY, **Volume:** 402 **Issue:** 5 **Pages:** 1827-1846 **DOI:** 10.1007/s00216-011-5405-5 (source WoS, accessed December 10<sup>th</sup>, 2015)

Selected publications (2012-present)

Turco, A., Corvaglia, S., Mazzotta, E., Pompa, P.P., Malitesta, C. (2017)

Preparation and characterization of molecularly imprinted mussel inspired film as antifouling and selective layer for electrochemical detection of sulfamethoxazole

*Sensors and Actuators, B: Chemical*. DOI:10.1016/j.snb.2017.09.164

Cesaria, M., Arima, V., Rella, S., Malitesta, C., Martucci, M.C., Manera, M.G., Tolomeo, A., Scilimati, A., Rella, R. (2018)

[18F]F-DOPA synthesis by poly(dimethylsiloxane)-based platforms: thermal aging protocol to reduce chemicals-induced damage

Sensors and Actuators, B: Chemical, 254, pp. 143-152. DOI: 10.1016/j.snb.2017.07.063

Ricciardi, M., Cespi, D., Celentano, M., Genga, A., Malitesta, C., Proto, A., Capacchione, C., Cucciniello, R. (2017)

Bio-propylene glycol as value-added product from Epicerol® process

Sustainable Chemistry and Pharmacy, 6, pp. 10-13. DOI: 10.1016/j.scp.2017.06.003

Mazzotta, E., Caroli, A., Primiceri, E., Monteduro, A.G., Maruccio, G., Malitesta, C. (2017)

All-electrochemical approach for the assembly of platinum nanoparticles/polypyrrole nanowire composite with electrocatalytic effect on dopamine oxidation

Journal of Solid State Electrochemistry, DOI: 10.1007/s10008-017-3693-1

Malitesta, C., Di Masi, S., Mazzotta, E. (2017)

From electrochemical biosensors to biomimetic sensors based on molecularly imprinted polymers in environmental determination of heavy metals

Frontiers in Chemistry, 5 (JUL), art. no. 47, DOI: 10.3389/fchem.2017.00047

Manera, M.G., Pellegrini, G., Lupo, P., Bello, V., de Julián Fernández, C., Casoli, F., Rella, S., Malitesta, C., Albertini, F., Mattei, G., Rella, R. (2017)

Functional magneto-plasmonic biosensors transducers: Modelling and nanoscale analysis

Sensors and Actuators, B: Chemical, 239, pp. 100-112. DOI: 10.1016/j.snb.2016.07.128

Giuri, A., Masi, S., Colella, S., Listorti, A., Rizzo, A., Gigli, G., Liscio, A., Treossi, E., Palermo, V., Rella, S., Malitesta, C., Esposito Corcione, C. (2016)

UV reduced graphene oxide PEDOT:PSS nanocomposite for perovskite solar cells

IEEE Transactions on Nanotechnology, 15 (5), art. no. 7398111, pp. 725-730. Cited 4 times. DOI: 10.1109/TNANO.2016.2524689

Turco Antonio, Mazzotta Elisabetta, Di Franco Cinzia, Santacroce Maria, Vittoria, Scamarcio Gaetano, Monteduro Anna Grazia, Primiceri Elisabetta, Malitesta Cosimino (2016)

Templateless synthesis of polypyrrole nanowires by non-static solution-surface electropolymerization

JOURNAL OF SOLID STATE ELECTROCHEMISTRY, vol. 20, p. 2143-2151, ISSN:1432-8488, doi: 10.1007/s10008-016-3206-7

Simona Rella, Giuseppe Egidio De Benedetto, Isabella Marchetta, Cosimino Malitesta (2016)

Provenancing of VI–VII century terra sigillata coming from Matera burial area by X-ray photoelectron spectroscopy

JOURNAL OF CULTURAL HERITAGE, vol. 17, p. 194-197, ISSN:1296-2074, doi: 10.1016/j.culher.2015.04.004

Mazzotta Elisabetta, Turco Antonio, Chianella Iva, Guerreiro Antonio, Piletsky Sergey A., Malitesta Cosimino (2016)

Solid-phase synthesis of electroactive nanoparticles of molecularly imprinted polymers. A novel platform for indirect electrochemical sensing applications

SENSORS AND ACTUATORS. B, CHEMICAL, vol. 229, p. 174-180, ISSN: 0925-4005, doi:10.1016/j.snb.2016.01.126

Barbaro, E., Zangrando, R., Kirchgeorg, T., Bazzano, A., Illuminati, S., Annibaldi, A., Rella, S., Truzzi, C., Grotti, M., Ceccarini, A., Malitesta, C., Scarponi, G., Gambaro, A. (2016)

An integrated study of the chemical composition of Antarctic aerosol to investigate natural and anthropogenic sources

Environmental Chemistry, 13 (5), pp. 867-876. DOI: 10.1071/EN16056

Turco A., Malitesta C., Barillaro G., Greco A., Maffezzoli A., Mazzotta E. (2015)

A magnetic and highly reusable macroporous superhydrophobic/superoleophilic PDMS/MWNT nanocomposite for oil sorption from water

JOURNAL OF MATERIALS CHEMISTRY. A, vol. 3, p. 17685-17696, ISSN: 2050-7488, doi: 10.1039/C5TA04353K

Giuri Antonella, Rella Simona, Malitesta Cosimino, Colella Silvia, Listorti Andrea, Gigli Giuseppe, Rizzo Aurora, Cozzoli Pantaleo Davide, Acocella Maria Rosaria, Guerra Gaetano, Esposito Corcione Carola (2015)

Synthesis of Reduced Graphite Oxide by a Novel Green Process Based on UV Light Irradiation

SCIENCE OF ADVANCED MATERIALS, vol. 7, p. 2445-2451, ISSN: 1947-2935, doi: 10.1166/sam.2015.2472

Rella, Simona; Giuri, Antonella; Corcione, Carola Esposito; Acocella, Maria Rosaria; Colella, Silvia; Guerra, Gaetano; Listorti, Andrea; Rizzo, Aurora; Malitesta, Cosimino (2015)

X-ray photoelectron spectroscopy of reduced graphene oxide prepared by a novel green method

Vacuum (ISSN:0042-207X) Vol. 119, pp 159-162  
DOI:10.1016/j.vacuum.2015.05.008

Simona Rella and Cosimino Malitesta (2015)

X-ray photoelectron spectroscopy characterization of aerosol particles in Antarctica

Antarctic Science (ISSN: 1365-2079) DOI: 10.1017/S0954102015000176

Antonio Turco, Cosimino Malitesta, Elisabetta Mazzotta (2015)

Molecularly Imprinted Overoxidized Polypyrrole as Recognition Element in the Electrochemical Detection of Sulfadimethoxine

Lecture Notes in Electrical Engineering. Volume 319, pp 153-157 DOI: 10.1007/978-3-319-09617-9\_27

S. Rella, C. Malitesta, E. Mazzotta, A. Turco, T. Siciliano, A. Tepore (2015)

XPS Investigation of Electrosynthesized Conducting Polymer Nanostructures of Application in Sensors. Preliminary Results.

Lecture Notes in Electrical Engineering. Vol. 319, pp 165-169 DOI: 10.1007/978-3-319-09617-9\_29

E. Filippo, M. Tepore, T. Siciliano, D. Chirizzi, C. Malitesta, M. R. Guascito (2014)  
Room temperature facile synthesis of CuO nanostructures by resistive heating  
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES  
(ISSN:1386-9477) Vol. 60, pp. 59 - 64

Giuseppe E. De Benedetto, Daniela Fico, Antonio Pennetta, Cosimino Malitesta, Giuseppe Nicolardi, Dario Domenico Lofrumento, Francesco De Nuccio, Velia La Pesa (2014)  
A rapid and simple method for the determination of 3,4-dihydroxyphenylacetic acid, norepinephrine, dopamine, and serotonin in mouse brain homogenate by HPLC with fluorimetric detection.  
JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS  
(ISSN:0731-7085) Vol. 98, pp. 266 - 270

Myriam Díaz-Álvarez, Elisabetta Mazzotta, Cosimino Malitesta, Antonio Martín-Esteban (2014)  
Evaluation of electrochemically synthesized sulfadimethoxine-imprinted polymer for solid-phase microextraction of sulphonamides  
JOURNAL OF MOLECULAR RECOGNITION (ISSN:0952-3499) Vol. 27, pp. 415 - 420

Maria Rachele Guascito, Daniela Chirizzi, Cosimino Malitesta, Livia Giotta, Disma Mastrogiacomo, Ludovico Valli, Loredana Stabili (2014)  
Development and characterization of a novel bioactive polymer with antibacterial and lysozyme-like activity  
BIOPOLYMERS (ISSN:0006-3525) Vol. 101, pp. 461 - 470

M. R. Guascito, E. Mesto, C. Malitesta, R. Picca, F. Scordari (2014). The effect of XPS background removing method on the appraisal of Ti and Fe: The case of phlogopites and brookite  
AMERICAN MINERALOGIST (ISSN:0003-004X) Vol. 99, pp. 139 - 148

Rosaria Anna Picca, Cosimino Malitesta, Reza Mohammadi, Fatemeh Ghorbani, Börje Sellergren (2014).  
Novel Format of Molecularly Imprinted Polymers for the Development of Electrochemical Sensors  
LECTURE NOTES IN ELECTRICAL ENGINEERING (ISSN:1876-1100) Vol. 162, pp. 165 - 169

Chirizzi, D., Guascito, M.R., Malitesta, C., Stabili, L.  
Spectroscopic characterization of a new antibacterial material for sensing applications  
(2014) Lecture Notes in Electrical Engineering (ISSN: 1876-1100), 162 LNEE, pp. 159-164.

Chirizzi, D., Guascito, M.R., Picca, R.A., Malitesta, C., Siciliano, M., Siciliano, T., Tepore, A.

Development and spectroscopic characterization of TeO<sub>2</sub>-NWs for amperometric detection of H<sub>2</sub>O<sub>2</sub>

(2014) Lecture Notes in Electrical Engineering (ISSN: 1876-1100), 162 LNEE, pp. 465-469

Cosimino Malitesta, Eleonora Margapoti (2013)

Insights from XPS on nanosized inorganic materials

In: Angela Dibenedetto, Michele Aresta, Inorganic Micro- and Nanomaterials. Synthesis and characterization.

Walter de Gruyter GmbH & Co. KGHome, Berlin/Boston: GERMANIA pp.47-55 (ISBN: 9783110306668)

Guascito, M.R., Ielpo, P., Cesari, D., Genga, A., Malitesta, C., Picca, R.A., Chirizzi, D., Contini, D. (2013)

Application of XPS surface analysis for characterization of size-segregated particulate matter from a urban background site in Lecce

4th IMEKO TC19 Symposium on Environmental Instrumentation and Measurements 2013: Protection Environment, Climate Changes and Pollution Control (ISBN: 978-162993106-7), pp. 68-71.

H. Xu, R. A. Picca, L. D. Marco, C. Carlucci, A. Scrascia, P. Papadia, B. F. Scremin, E. Carlino, C. Giannini, C. Malitesta, M. Mazzeo, G. Gigli, G. Ciccarella (2013)

Nonhydrolytic Route to Boron-Doped TiO<sub>2</sub> Nanocrystals.

EUROPEAN JOURNAL OF INORGANIC CHEMISTRY (ISSN:1099-0682) 3, pp. 364-374

E. Mazzotta, C. Malitesta, E. Margapoti (2013)

Direct electrochemical detection of bisphenol A at PEDOT-modified glassy carbon electrodes

ANALYTICAL AND BIOANALYTICAL CHEMISTRY (ISSN:1618-2642) Vol. 405, pp. 3587 - 3592

Cosimino Malitesta, Maria Rachele Guascito, Elisabetta Mazzotta, Tiziana Siciliano, Antonio Tepore (2013) Copper nanoparticles/poly-3-methylthiophene composite: Synthesis, characterization and catalytic application to enzyme-less glucose detecting SENSORS AND ACTUATORS. B, CHEMICAL (ISSN:0925-4005) Vol. 184, pp. 70 – 77

Maria Rachele Guascito, Daniela Chirizzi, Cosimino Malitesta, Tiziana Siciliano, Antonio Tepore (2013)

Te oxide nanowires as advanced materials for amperometric nonenzymatic hydrogen peroxide sensing

TALANTA (ISSN:0039-9140) Vol. 115, pp. 863 - 869

Elisabetta Mazzotta, Cosimino Malitesta, Salvatore Surdo, Giuseppe Barillaro (2013)

Microstructuring conducting polymers and molecularly imprinted polymers by lightactivated electropolymerization on micromachined silicon. Applications in electrochemical sensing

12th IEEE SENSORS 2013 Conference; Baltimore, MD; United States; 4 November 2013 through 6 November 2013

2013 IEEE SENSORS - Proceedings (ISBN: 978-146734640-5 )Article number 6688482

S. Surdo, L. M. Strambini, C. Malitesta, E. Mazzotta, G. Barillaro (2012)  
Highly Conformal Growth of Microstructured Polypyrrole Films by Electrosynthesis on Micromachined Silicon Substrates  
ELECTROCHEMISTRY COMMUNICATIONS, vol. 14, p. 1-4, ISSN: 1388-2481

M. R. Guascito, C. Malitesta, L. Sabbatini (2012)  
Nucleation and Growth of Copper particles on Pt and Pt/Poly-3-Methylthiophene Modified Electrode in Presence of Cl<sup>-</sup> Complexing Agent  
MATERIALS CHEMISTRY AND PHYSICS, vol. 131 , p. 719-727, ISSN: 0254-0584, doi:10.1016/j.matchemphys.2011.10.041

Elisabetta Mazzotta, Cosimino Malitesta, Myriam Díaz-Álvarez, Antonio Martin-Esteban (2012)  
Electrosynthesis of molecularly imprinted polypyrrole for the antibiotic levofloxacin  
THIN SOLID FILMS, vol. 520, p. 1938-1943, ISSN: 0040-6090, doi: 10.1016/j.tsf.2011.09.039

Cosimino Malitesta, Elisabetta Mazzotta, Rosaria A. Picca, Alessandro Poma, Iva Chianella, Sergey A. Piletsky (2012)  
MIP sensors - the electrochemical approach  
ANALYTICAL AND BIOANALYTICAL CHEMISTRY, vol. 402, p. 1827-1846, ISSN: 1618-2642, doi: 10.1007/s00216-011-5405-5

Cosimino Malitesta, Rosaria Anna Picca, Elisabetta Mazzotta, Maria Rachele Guascito (2012)  
Tools for the development of electrochemical sensors: an EQCM flow cell with flow focusing  
ELECTROANALYSIS, vol. 24, p. 790-797, ISSN: 1040-0397, doi: 10.1002/elan.201100559

Maria Rachele Guascito, Daniela Chirizzi, Cosimino Malitesta, Maria Siciliano, Tiziana Siciliano, Antonio Tepore (2012)  
Amperometric non-enzymatic bimetallic glucose sensor based on platinum tellurium microtubes modified electrode  
ELECTROCHEMISTRY COMMUNICATIONS, vol. 22, p. 45-48, ISSN:1388-2481, doi: 10.1016/j.elecom.2012.05.024

### **Lectures/Seminars**

Invited Speaker      *XPS of nano-sized inorganic materials: fundamentals of technique and peculiarities in application to nano-sized objects*, EuCheMS School on *Synthesis and Characterization of Novel Nano-Sized Inorganic Materials*, June 17-22, 2012, Bari (Italy)

Over 200 presentations at national and international Conferences/Schools.

### **Funding/Collaborations**

Responsible of Research Unit in projects:

- Funding Institution/Agency: Vigoni Program (2009). Type of Project: Vigoni-DAAD. Position: Italian Responsible. Foreign Partner: Professor Börje Sellergren, Institute of Environmental Research, Dortmund University of Technology, Dortmund, Germany.
- Funding Institution/Agency: MIUR (2009). Type of Project: Bilateral Agreement Italy-Spain. Position: Italian Responsible. Foreign Partner: Dr. Antonio Martin-Esteban (INIA, Madrid).
- Funding Institution/Agency: National Program of Research in Antarctica (2009).
- Funding Institution/Agency: MIUR. Type of Project: PRIN 2002, 2004, 2009, 2015.
- Funding Institution/Agency: EU Type of Project : PIC INTERREG IIIA Greece-Italy 2000-2006 Title: ECODONET (project code I3101041)
- Funding Institution/Agency: EU Type of Project: ESF and ERDF, Seventh Framework Programme 2007-2013 FP7 Title: RELA-VALBIOR/APULIA
- Funding Institution/Agency: EU Type of Project: ESF and ERDF, Seventh Framework Programme 2007-2013 FP7 Title: LAIFF/APULIA
- Funding Institution/Agency: EU/MIUR Type of Project: National Operational Programme for Research and Competitiveness 2007-2013 Act no.254/Ric (May 18<sup>th</sup> 2011) Title: 2HE (HUMAN AND ENVIRONMENTAL HEALTH) Research center

### **Positions in National and International Bodies**

- Deputy-Chairman of the Division of Analytical Chemistry, Italian Chemical Society (SCI) for one term (2007-2009) and member of the Board of Directors of the same Institution (2004-2006)
- Member of the Board of Directors of the Biotechnology Interdivisional Group (SCI) (2011-2013)
- Member of organizing and scientific committees of international and national conferences
- Member of the Editorial Board of INTERNATIONAL SCHOLARLY RESEARCH NOTICES (ISSN: 2356-7872) (2014-)
- Member of the Editorial Board of ISRN ELECTROCHEMISTRY (ISSN: 2314-5439) (2012-2014)
- Associate Editor of Frontiers in Chemistry – section Analytical Chemistry (ISSN: 22962646)