

PERSONAL INFORMATION

Maddalena Pizzotti

JOB APPLIED FOR
POSITION
PREFERRED JOB
STUDIES APPLIED FOR
PERSONAL STATEMENT

Full Professor in General and Inorganic Chemistry for Industrial Chemistry – Milan University

WORK EXPERIENCE

From 1/10/2002 Temporary Professor and from 1/10/2005 up to today Full Professor in General and Inorganic Chemistry at University of Milan

From 1/4/1983 to 2002 Associate Professor in General and Inorganic Chemistry at Milan University

From 1979 to 1983 Assistant at General Chemistry chair of Milan University

From 1975 to 1979 Post Doc at Milan University

From 2009 up to today teacher of General and Inorganic Chemistry for Industrial Chemistry at Milan University

From 1999 up to today teacher of “Principles and Applications of Metallorganic Chemistry” for Industrial Chemistry, in English.

From 2002 to 2009 teacher of General and Inorganic Chemistry for Biotechnology, at Milan University

Before 2002 teacher of “Laboratory of General and Inorganic Chemistry” for Industrial Chemistry at Milan University.

From 2008 to 2012 Head of Inorganic Metallorganic and Analytical Chemistry Department at Milan University.

From 1/10/2015 to 30/09/2018 Coordinator of PhD School in Industrial Chemistry

EDUCATION AND TRAINING

Replace with dates (from - to)

Degree in Chemistry cum laude in 1973 at University of Milan

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
english	Independent user	Proficient user	Independent user	Proficient user	Proficient user
Replace with name of language certificate. Enter level if known.					

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 Associate Professor and Full Professor

Organisational / managerial skills ▪ organisational / managerial skills gained as Head of Department and Coordinator of PhD School. Moreover, leadership skills gained as PI or local coordinator of many research projects.

Job-related skills Replace with any job-related skills not listed elsewhere. Specify in what context they were acquired.
 Example:

- Organometallic chemistry in the low oxidation states
- Catalytic activity of ruthenium complexes and their reactivity
- Surface organometallic chemistry
- Non linear optical activity of organometallic compounds and, in particular, of porphyrinic complexes and of heteronuclear bimetallic systems carrying a π conjugated bridge between the two metals.
- Nanoorganisation of NLO active chromophores on oligocyclosiloxanic polymers as pseudo planar scaffolds similar to the silica surface, in order to study the cooperative interaction between the chromophores due to their nanoorganisation.
- Synthesis and characterisation of porphyrins and metallo porphyrins with a large π delocalisation for their applications in Dye sensitized solar cells Grätzel cells)
- Synthesis of completely fluorinated Er³⁺ complexes as photoemitters in the field of telecommunications

Digital skills

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

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

Replace with name of ICT-certificates

Driving licence Driving licence category B

ADDITIONAL INFORMATION

Publications Author of more than 100 publications on international journals with high IF , 4 chapters of books and 4 Patents.

The most recent publications (from 2010 to 2018)

- 1) S. Di Bella, C. Dragonetti, M. Pizzotti, D. Roberto, F. Tessore, R. Ugo
Coordination and Organometallic Complexes as Second-Order Nonlinear Optical Molecular Materials
Top Organomet. Chem. **2010**, *28*, 1-55
- 2) R.M. Laine, S. Sulaiman, C. Brick, M. Roll, R. Tamaki, M.Z. Asuncion, M. Neurock, J.-S. Filhol, C.-Y. Lee, J. Zhang, T. Goodson III, M. Ronchi, M. Pizzotti, S.C. Rand, Y. Li
Synthesis and Photophysical Properties of Stilbeneoctasilsesquioxanes. Emission Behaviour Coupled with Theoretical Modeling Studies Suggest a 3-D Excited State Involving the Silica Core.
J. Am. Chem. Soc. **2010**, *132*, 3708-3722
- 3) A. Orbelli Biroli, M. Pizzotti, P. Illiano, F. Demartin
Er³⁺ and Eu³⁺ complexes with heptafluoroacetylacetonate and tris(pentafluoro)phenylphosphine oxide: the role of the pentafluorophenyl group on structural and electronic properties.
Inorg. Chim. Acta **2011**, *366*, 254-261
- 4) Marco Ronchi, Alessio Orbelli Biroli, Daniele Marinotto, Maddalena Pizzotti, M. C. Ubaldi and S. M. Pietralunga.
The role of the size of molecular second order NLO chromophores on the SHG of PMMA films containing NLO active tetracyclosiloxanolate macrocycles.
J. Phys. Chem. C **2011**, *115*, 4240-4246.
- 5) Alessio Orbelli Biroli, Francesca Tessore, Maddalena Pizzotti, Cinzia Biaggi, Renato Ugo, Stefano Caramori, Carlo Bignozzi, Filippo De Angelis, Emanuela Licandro, Elena Longhi
A multitechnique investigation of the electronic properties and processes involving push-pull metal porphyrins acting as dyes in DSSC solar cells.
J. Phys. Chem. C, **2011**, *115*, 23170-23182
- 6) Davide Espa, Luca Pilia, Luciano Marchiò, Flavia Artizzu, Angela Serpe, Maria Laura Mercuri, Dulce Simão, Manuel Almeida, Maddalena Pizzotti, Francesca Tessore, Paola Deplano
Mixed-ligand Pt(II) dithione-dithiolato complexes: influence of the dicyanobenzodithiolato ligand on the second order NLO properties. DOI: 10.1039/b000000x
Dalton Trans. **2012**, *41*, 3485-3493.
- 7) Davide Espa, Luca Pilia, Luciano Marchiò, Maddalena Pizzotti, Neil Robertson, Francesca Tessore, M. Laura Mercuri, Angela Serpe and Paola Deplano. Electrochromic second-order NLO chromophores based on M^{II} (M = Ni, Pd, Pt) complexes with diselenolato-dithione (donor-acceptor) ligands. DOI: 10.1039/C2DT31537H
Dalton Trans. **2012**, *41*, 12106
- 8) Patrizia Romana Mussini, Alessio Orbelli Biroli, Francesca Tessore, Maddalena Pizzotti, Cinzia Biaggi, Gabriele Di Carlo, Maria Grazia Lobello, Filippo De Angelis
Modulating the electronic properties of asymmetrical push-pull and symmetrical Zn(II)-diarylporphyrinates with *para* substituted phenylethynyl moieties in 5,15 *meso* positions: a combined electrochemical and spectroscopic investigation.
Electrochimica Acta, **2012**, *85*, 509-523
- 9) Gabriele Di Carlo, Alessio Orbelli Biroli, Maddalena Pizzotti, Francesca Tessore, Vanira Trifiletti, Riccardo Ruffo, Alessandro Abbotto, Anna Amat, Filippo De Angelis, Patrizia Romana Mussini
Tetraaryl Zn^{II}-porphyrinates substituted in the β-pyrrolic position acting as sensitizers in DSSCs: a comparison with *meso* disubstituted push-pull Zn^{II}-porphyrinates.
Chemistry Eur. J. **2013**, *19*, 10723-10740.
- 10) Di Carlo, G.; Orbelli Biroli, A.; Tessore, F.; Pizzotti, M.; Mussini, P.; Amat, A.; De Angelis, F.; Abbotto, A.; Trifiletti, V. Ruffo, R.
A Physico-Chemical Investigation of the Panchromatic Effect on *para*-Substituted Zn(II) Porphyrinates for DSSCs: The Role of the Bridge between a Dithienylethylene Unit and the Porphyrinic Ring
J. Phys. Chem. C. **2014**, *118*(14), 7307-7320.
- 11) Pilia, L.; Pizzotti, M.; Tessore, F.; Robertson, N.
NLO properties of α-Diimine-Dithiolate Ni(II) complexes enhanced by electron-withdrawing carboxyl groups
Inorg. Chem. **2014**, *53*(9), 4517-4526

- 12) G. Di Carlo, S. Caramori, V. Trifiletti, R. Giannuzzi, L. De Marco, M. Pizzotti, A. Orbelli Biroli, F. Tessore, R. Argazzi, C. A. Bignozzi
Influence of Porphyrinic Structure on Electron Transfer Processes at the Electrolyte/Dye/TiO₂ Interface in PSSCs: a Comparison between *meso* Push-Pull and β -Pyrrolic Architectures
Applied Materials & Interfaces, **2014**, *6*, 15841-15852.
- 13) Planells, Miquel; Pizzotti, Maddalena; Nichol, Gary S.; Tessore, Francesca; Robertson, Neil
Effect of torsional twist on 2nd order non-linear optical activity of anthracene and pyrene tricyanofuran derivatives
Phys. Chem. Chem. Phys., **2014**, *16*, 23404-23411. DOI: 10.1039/C4CP03509G
- 14) A. Orbelli Biroli, F. Tessore, V. Vece, G. Di Carlo, P. R. Mussini, V. Trifiletti, L. De Marco, R. Giannuzzi, M. Manca and M. Pizzotti
Highly improved performance of ZnII tetraarylporphyrinates in DSSCs by the presence of octyloxy chains in the aryl rings
J. Mater. Chem. A, **2015**, *3*, 2954.
- 15) Luca Pilia, Maddalena Pizzotti, Francesca Tessore, and Neil Robertson
Tuning the LUMOs' energies of 1,10-phenanthroline in \square -Diimine-Dithiolate Ni(II) complex and enhancement of nonlinear optical properties.
Inorg. Chim. Acta, **2015**, *430*, 114-119
- 16) Di Carlo, Gabriele; Orbelli Biroli, Alessio; Tessore, Francesca; Rizzato, Silvia; Forni, Alessandra; Magnano, Giulia; Pizzotti, Maddalena
Light-Induced Regiospecific Bromination of *meso*-Tetra(3,5-Di-*tert*-butylphenyl)Porphyrin on 2,12 beta-Pyrrolic Positions
J. Org. Chem. **2015**, *80*, 4973-4980
- 17) Andrea Fermi, Mirko Locritani, Gabriele Di Carlo, Maddalena Pizzotti, Stefano Caramori, Yixuan Yu, Brian A. Korgel, Giacomo Bergamini, Paola Ceroni
Light-harvesting antennae based on photoactive silicon nanocrystals functionalized with porphyrin chromophores.
Faraday Discussions, **2015**, *185*, 481 DOI: 10.1039/c5fd00098j
- 18) G. Magnano, D. Marinotto, M.P. Cipolla, V. Trifiletti, A. Listorti, P.R. Mussini, G. Di Carlo, F. Tessore, M. Manca, A. Orbelli Biroli, M. Pizzotti
Influence of alkoxy chains envelope on the interfacial photoinduced processes in tetraarylporphyrin-sensitized solar cells
Phys. Chem. Chem. Phys., **2016**, *18*, 9577 - 9585 DOI: 10.1039/C6CP00129G
- 19) Kabali Senthilkumar, Krishnan Thirumoorthy, Maddalena Pizzotti, Gabriele Di Carlo, Stefania Righetto, Alessio Orbelli Biroli, Matti Haukka, Nallasamy Palanisami.
New Internal Charge Transfer Second Order NLO Chromophores based on the donor Ferrocenylpyrazole Moiety.
J. Phys. Chem C, **2016**, *120*, 20277-20287
- 20) Luca Pilia, Daniele Marinotto, Maddalena Pizzotti, Francesca Tessore, and Neil Robertson
High Second-Order NLO Response Exhibited by the First Example of Polymeric Film Incorporating a Diimine-Dithiolate Square-Planar Complex: The [Ni(o-phen)(bdt)]
J. Phys. Chem C, **2016**, *120*, 19286-19294.
- 21) A. Covezzi, A. Orbelli Biroli, F. Tessore, A. Forni, D. Marinotto, P. Biagini, G. Di Carlo, M. Pizzotti.
4D- π -1A Type β -substituted Zn^{II} porphyrins: Ideal Green Sensitizers for Building Integrated Photovoltaics.
Chem. Comm. **2016**, *52*, 12642-12645 DOI: 10.1039/c6cc05870a
- 22) Alessio Orbelli Biroli, Francesca Tessore, Stefania Righetto, Alessandra Forni, Alceo Macchioni, Luca Rocchigiani, Maddalena Pizzotti, Gabriele Di Carlo.
Intriguing influence of -COOH-driven intermolecular aggregation and acid-base interactions with DMF on the second order NLO response of 5,15 push-pull diaryl Zn(II) porphyrinates
Inorg. Chem. **2017**, *56*, 6438-6450.
- 23) Salahuddin Attar, Davide Espa, Flavia Artizzu, Luca Pilia, Angela Serpe, Maddalena Pizzotti, Gabriele

Di Carlo, Luciano Marchiò and Paola Deplano.
Optically Multiresponsive Heteroleptic Platinum-dithiolene Complex with Proton Switchable Properties.
Inorg Chem. **2017**, *56*, 6763–6767

24) Gabriele Di Carlo, Alessio Orbelli Biroli, Francesca Tessore, Stefano Caramori, Laura Casarin, Roberto Argazzi, Aurelio Oriana, Giulio Cerullo, Carlo Alberto Bignozzi and Maddalena Pizzotti.

Charge transfer dynamics in β and *meso* substituted DTE Porphyrins.
J.Chem Phys. C **2017**, *121*, 18385–18400

25) Colombo, Alessia; Di Carlo, Gabriele; Dragonetti, Claudia; Magni, Mirko; Orbelli Biroli, Alessio; Pizzotti, Maddalena; Roberto, Dominique; Tessore, Francesca; Benazzi, Elisabetta; Bignozzi, Carlo; Casarin, Laura; Caramori, Stefano

Coupling of zinc porphyrin dyes and copper electrolytes: a springboard for novel sustainable dye-sensitized solar cells.

Inorg. Chem. **2017**, *56*, 14189-14197

26) Gabriele Di Carlo, Alessio Orbelli Biroli, Francesca Tessore, Stefano Caramori, Maddalena Pizzotti
 β -substituted porphyrins as dyes for DSSC: a possible approach to photovoltaic glass modules

Coord. Chem. Rev. **2018**, *358*, 153-177

27) Salahuddin S. Attar, Flavia Artizzu, Luciano Marchiò, Davide Espa, Luca Pilia, Maria Francesca Casula, Angela Serpe, Maddalena Pizzotti, Alessio Orbelli Biroli, and Paola Deplano.
Uncommon Optical Properties and Silver-responsive Turn-off/on Luminescence in a Pt(II) heteroleptic dithiolene complex.

Chemistry Eur. J. **2018**, *24*, 10503-10512 DOI 10.1002/chem.201801697

28) Francesca Tessore, Alessio Orbelli Biroli, Gabriele Di Carlo, Maddalena Pizzotti. Porphyrins for second order non-linear optics (NLO): an intriguing history.

Inorganics **2018**, *6*, 81-98.

29) Gabriele Di Carlo, Alessio Orbelli Biroli, Maddalena Pizzotti, and Francesca Tessore.

Efficient sunlight harvesting by A_4 β -pyrrolic substituted Zn^{II} porphyrins.

Frontiers, **2018**, submitted

Collaborations with many national and international research centres including:
University of Milano Bicocca, University of Padova, University of Perugia, University of Ferrara, Swiss Federal Institute of Technology -Lausanne, University of Cachan (France), University of Roma.

Coordinator of numerous research projects PRIN, Cariplo, Lombardia region, both as Principal Investigator and local coordinator.

Numerous participations at National and International Conferences.

Member of Italian Chemical Society

Founder member of the "Inorganic and Metallorganic School", a school of advanced inorganic chemistry for young researchers, from 1984 to 1992.

Member of organizing committee of the third International Conference of Homogeneous Catalysis in Milan from 30/08 to 3/09 1982.

Personal information

I authorize the handling of personal information in this curriculum, according to D.Lgs n. 196/03 and following modifications and Regulations EU 679/2016 (General Regulations concerning Data Protection or GDPR) and art. 7 of University Regulations concerning protection of personal information.

I authorize, according to D.Lgs 14/03/2013 n. 33 concerning transparency, in case of conferment of the position and of

the fellowship, the publication of this curriculum in the web site of Università degli Studi di Milano in the section "Amministrazione trasparente", "Consulenti e collaboratori".

Date 12/10/2018

Signature

