

CURRICULUM VITAE ET STUDIORUM: Prof. Luca RIGAMONTI, PhD



Personal data: Born in Mariano C. (CO), Italy; date: 19 February 1980

Present Position: Associate Professor from **December 2021**

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EDUCATION

- **October 2004** Degree in Chemistry (summa cum laude) at the Università degli Studi di Milano with a thesis entitled '**Sintesi e Caratterizzazione di Complessi di Rame(II) con Analoghi del Salen Asimmetricamente Sostituiti per Applicazioni in Ottica Non Lineare** (translation: Synthesis and Characterization of Unsymmetrically Substituted Salen-Type Copper(II) Complexes for Nonlinear Optical (NLO) Applications)', under the supervision of Prof. Alessandro Pasini
- **December 2007** Ph.D. in Chemical Sciences at the Università degli Studi di Milano with a thesis entitled '**Chemical and Magnetic Studies on Tridentate Schiff Base Cu(II) Complexes and Nonlinear Optical Studies on Salen-Type Cu(II) Complexes and Ru(II) Alkynyl Organometallics**' under the supervision of Prof. Alessandro Pasini and co-supervision of Prof. Mark G. Humphrey (Australian National University (ANU), Research School of Chemistry, Canberra, ACT, Australia)

PREVIOUS POSITIONS AND FELLOSHIPS

- **From November 2007 to October 2011:** postdoctoral position at the Università degli Studi di Milano, Dipartimento di Chimica (Legge n. 449/1997, art. 51, comma 6 e s.m.i.)
- **From November 2011 to October 2012:** postdoctoral position at the Università degli Studi di Firenze, Dipartimento di Chimica 'Ugo Schiff' (Legge n. 240/2010, art. 22)
- **From December 2012 to November 2015** young researcher (RTDa) at the Università degli Studi di Modena e Reggio Emilia, Dipartimento di Scienze Chimiche e Geologiche (Legge n. 240/2010, art. 24, comma 3, lett. a)
- **From December 2015 to November 2016:** postdoctoral position at the Università degli Studi di Modena e Reggio Emilia, Dipartimento di Scienze Chimiche e Geologiche (Legge n. 240/2010, art. 22)
- **From April 2017 to March 2018:** postdoctoral position at the Università degli Studi di Modena e Reggio Emilia, Dipartimento di Scienze Chimiche e Geologiche (Legge n. 240/2010, art. 22)
- **From April 2018 to November 2018:** postdoctoral position at the Università degli Studi di Modena e Reggio Emilia, Dipartimento di Scienze Chimiche e Geologiche (Legge 4 aprile 2012, n. 35)
- **From December 2018 to November 2021:** tenure-track senior researcher (RTDb) at the Università degli Studi di Modena e Reggio Emilia, Dipartimento di Scienze Chimiche e Geologiche (Legge n. 240/2010, art. 24, comma 3, lett. b)

VISITS AND STAYS

- **From January 2006 to February 2007** (13 months): visiting Ph.D. student at the Australian National University (ANU), Research School of Chemistry, Canberra, ACT, Australia, under the supervision of Prof. Mark G. Humphrey
- **Between 2008 and 2009** (2 months): short stays as visiting scientist for collaborative research on the magnetic characterization of copper(II) polynuclear compounds at the Prof. Jan Reedijk's laboratory, Universiteit Leiden, Leiden Institute of Chemistry, Leiden, The Netherlands
- **From December 2009 to January 2010** (2 months): visiting scientist at the Australian National University (ANU), Research School of Chemistry, Canberra, Australia, Supervisor: Prof. Mark G. Humphrey, as winner of the ACT-ARIA Award to promote collaborative scientific research between Italy and Australia with the project: **Hybrid coordination-organometallic systems for nonlinear optics**.

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITIES

Luca's research is focused on the synthesis, spectroscopic and structural characterizations of molecular systems, and the study of their reactivity and magnetic, optical and biological properties upon modulation of their electronic features.

Keywords: nonlinear optics (NLO), magnetic properties, spin crossover (SCO), single-molecule magnets (SMMs), structure-property correlation, chemometrics, transition metals, lanthanides, Schiff bases, ligand functionalization, polynuclear complexes, metal-organic frameworks (MOFs), coordination polymers (CPs), curcumin, radio-drugs, cytotoxicity, cerium, bioglasses, composite materials, epoxy resins, polyurethanes, didactics.

- Copper(II) complexes with NNO tridentate Schiff base ligands: synthetic strategies from mono to oligonuclear derivatives through metal template effect; structural characterisation with single crystal X-ray diffraction; study of the magnetic communication between the metal centres through the bridging ligands and modulation of their features by the effect of peripheral substituents; insertion of chiral centres along with the ligand organic skeleton for chiral induction in trinuclear propeller-like complexes; studies of their biological behaviour as potential anticancer agents.
- Cobalt(II) compounds with tridentate nitrogen-rich donor ligands: modelling through chemiometrics tools, synthesis of new ligands and crystallization of the corresponding cobalt(II) complexes; structural characterisation with single crystal X-ray diffraction; study of the magnetic properties for SMM behaviour: modulation of the slow relaxation of the magnetization through external stimuli like pressure, or by efficient coupling with redox- or photo-active molecules; supramolecular organization into MOFs and CPs.
- Iron(II) compounds with tridentate nitrogen-rich donor ligands: synthesis of new ligands and crystallization of the corresponding iron(II) complexes; structural characterisation with single crystal X-ray diffraction; study of the magnetic properties for SCO behaviour: modulation of the thermodynamically-stable ground spin state through ligand functionalization; photo-induced and under-pressure magnetic studies for metastable spin state trapping.
- Oligonuclear copper, cobalt, iron and manganese compounds with tetra- and penta-dentate salen-type Schiff base ligands: synthesis of ligands and metal complexes with also mixed oxidation states; structural characterisation with single crystal X-ray diffraction; characterization of the anomalous coordination environments; study of the magnetic communication between the metal ions through the bridging ligands and stabilization of ground spin states $S \neq 0$; study of the catalytic activity in different coupling reactions.

- Structural and magnetic characterizations of oligonuclear SMMs and their functionalization for anchoring on surfaces; study of structural modifications of known SMMs in order to enhance their evaporability (e.g. use of fluorinated ligands) and magnetic anisotropy (i.e. through the insertion of rare earth ions).
- Transition metal complexes with tetradentate Schiff base ligands and macrocycles possessing a permanent dipole moments for application in NLO: metal-assisted template synthesis (Cu, Ni, Zn and other metals) for unsymmetrically-substituted Schiff base assembly; experimental measurements of first-order hyperpolarizability β with Electric Field Induced Second Harmonic generation (EFISH), Hyper-Rayleigh Scattering (HRS) and solvatochromic techniques; use of theoretical calculations (optimised geometries, dipole moments μ_g , β values, etc.) in understanding structure-property relationship.
- Extended delocalised chain dipolar organometallic compounds for second- and third-order NLO: use of palladium-catalysed Sonogashira coupling reactions to obtain long arylene-ethylene conjugated chains and coupling with electron-rich ruthenium(II) centres (e.g. *cis*-[RuCl₂(dppe)₂]); photo-, redox- and proton-modulation of the NLO response.
- Synthesis, reactivity, structural and spectroscopic (NMR) studies of square planar platinum(II) coordination compounds with neutral phosphorous ligands (e.g. PPh₃, POR₃); experimental and theoretical quantification of the *cis* and *trans* influences in *cis/trans*-[PtXY(PPh₃)₂] and *cis*-[PtXL(PPh₃)₂]⁺ derivatives (X, Y = anionic ligands, e.g. NO₃⁻, AcO⁻, L = neutral ligand, e.g. PPh₃, pyridine, NH₃).
- Synthesis of new radio-drugs specifically designed for the early diagnosis of the Alzheimer disease, obtained from the combination of a bifunctional chelating agent, which shown affinity for amyloid fibrils/aggregates, with a positron radio-metal emitter (⁶⁸Ga) to be employed in the Positron Emitting Tomography (PET). The molecular structure targeting the amyloid aggregates is curcumin, polyphenol extracted from Curcuma Longa L., and its synthetic derivatives variably functionalised with the aim of linking the chelating fragment, represented by macrocycles employed in radio-medicine.
- Composites based on inorganic (such as silicon carbide as abrasive) and organic (epoxy resins and polyurethanes, etc.) materials for glass and stone processing and enhancement of their technological performances.
- The fundamental chemical concepts and their perception in the educational field and in teaching in schools of all levels, creation of *ad hoc* questionnaires for students and evaluation of the answers in search of misconceptions rooted in the education of children and study of strategies to improve teaching.

The different research activities take advantage of the intensive collaboration with several National and International researchers and professors all around the World.

FUNDING AND PROJECTS

- Project: **Hybrid coordination-organometallic systems for nonlinear optics** winner of the ACT-ARIA Award 2009 to promote the scientific research between Italy and Australia, budget: 3000 AUD, visiting scientist from November 2009 to January 2010 (2 months) at the Australian National University (ANU), Research School of Chemistry, Canberra, Australia, under the supervision of Prof. Mark G. Humphrey
- Sincrotrone Elettra Proposal n. 20170188, title: **Powder X-ray diffraction structural studies on solvent-responsive spin crossover iron(II) compounds**, use of the beamline MCX (Material Characterization via X-ray diffraction), 8-10 December 2017 (total: 48 h), proposer:

Dr. Luca Rigamonti, participants: Dr. Luca Rigamonti, Dr. Rita Mazzoni (Università degli Studi di Bologna)

- Synchrotron Elettra Proposal n. 20195015, title: **X-ray diffraction studies on potential bioactive copper(II) compounds with Schiff base ligands**, use of the beamline XRD1 (X-ray diffraction) 30-31 January 2020 (total: 24 h), proposer: Dr. Luca Rigamonti, participant: Dr. Luca Rigamonti.
- Interdisciplinary (LS-PE) UniMORE project: **AGAPI: flow-dependent regulation of Angiopoietin-2 and the role of Genistein in modulating the Angiogenic Potential and Immunomodulation abilities of mesenchymal stem cells isolated from dental pulp** Fondo di Ateneo per la Ricerca Interdipartimentale 2019 (FAR2019), budget: 80000 €, leading proposer LS: Dr. Gianluca Carnevale (UniMORE), participants PE: Dr. Luca Rigamonti and Dr. Roberto Rosa (UniMORE), duration: July 2019 – June 2022 (3 years, delayed because of covid-19 pandemic).
- UniMORE project: **Metodologie sperimentali, chemiometriche e computazionali per lo studio di complessi metallici** Fondo di Ateneo per la Ricerca Dipartimentale (FAR2019), budget: 2075 €, duration: September 2019 – March 2021 (2 years – delayed because of covid-19 pandemic).
- Project: **Nitrogen-donor ligands for new molecular iron(II) spin crossover complexes and cobalt(II) single-molecule magnets** Royal Society of Chemistry (RSC) Research Fund 2019, budget: 4000 £, duration: January 2020 – December 2022 (2 year, delayed because of covid-19 pandemic).
- Synchrotron Elettra Proposal n. 20200030, title: **X-ray diffraction studies on electronically and sterically modulated citotoxic copper(II) compounds**, use of the beamline XRD2 (X-ray diffraction 2) 17 March 2020 (total: 8 h), proposer: Dr. Luca Rigamonti, participant: Dr. Luca Rigamonti.
- UniMORE project: **Leganti azotati tridentati e loro complessi di ferro(II) a comportamento spin crossover e di cobalto(II) come magneti a singola molecola** Fondo Dipartimentale Ricerca (FDR2020), budget: 2000 €, duration: September 2020 – July 2022 (2 years, delayed because of covid-19 pandemic).
- Research project in collaboration with F. Hoffmann-La Roche Ltd, Basel, Switzerland: **Synthesis of copper(II) complexes bearing salmen and salben ligands** budget: 3000 €, duration: September 2021 – August 2022 (1 year).
- UniMORE project: **Organometallic complexes bearing salmen and salben ligands and their application in catalysis** Fondo Dipartimentale Ricerca 2021 linea dottorato (FDR2021), budget: 30000 €, duration: November 2022 – October 2025 (3 years).
- UniMORE project: **Organometallic complexes bearing salmen and salben ligands and their application in catalysis (part II)** Fondo Dipartimentale Ricerca 2024 linea dottorato (FDR2024), budget: 30000 €, duration: November 2025 – October 2028 (3 years).

TEACHING ACTIVITIES

- **October – December 2005**: assistant lecturer for the General Chemistry course at the Facoltà di Agraria, UniMI, lecturer: Prof. Luigi Garlaschelli, academic year **2005/2006**
- **October 2007**: laboratory assistant for the Instrumental Analytical Chemistry course for biotechnology students, UniMI, lecturer: Dr. Maria Grassi, academic year **2007/2008**

- **November – December 2007**: assistant lecturer for the General Chemistry course at the Facoltà di Agraria, UniMI, lecturer: Prof. Luigi Garlaschelli, academic year **2007/2008**
- **March – May 2008**: laboratory assistant for the General Chemistry course for biology students, UniMI, lecturer: Prof. Donatella Strumolo, academic year **2007/2008**
- **November – December 2008**: assistant lecturer for the General Chemistry course at the Facoltà di Agraria, UniMI, lecturer: Prof. Luigi Garlaschelli, academic year **2008/2009**
- **January 2009**: laboratory assistant for the Instrumental Analytical Chemistry course for biotechnology students, UniMI, lecturer: Dr. Laura Santagostini, academic year **2008/2009**
- **May – June 2009**: laboratory assistant for the General Chemistry course for biology students, UniMI, lecturer: Prof. Achille Fusi, academic year **2008/2009**
- **March – June 2010**: laboratory assistant for the General Chemistry course for biology students, UniMI, lecturer: Prof. Luigi Garlaschelli, academic year **2009/2010**
- **January – March 2011**: assistant lecturer for the General Chemistry course at the Facoltà di Agraria, UniMI, lecturer: Prof. Luigi Garlaschelli, academic year **2010/2011**
- **March – May 2011**: laboratory assistant for the General Chemistry course for biology students, UniMI, lecturer: Prof. Donatella Strumolo, academic year **2010/2011**
- **March – June 2013**: laboratory assistant for the Inorganic Chemistry course for bachelor students in Chemistry, UniMORE, lecturer: Prof. Ledi Menabue, academic year **2012/2013**
- **March – June 2013**: laboratory assistant for the Advanced Inorganic Chemistry course for master students in Chemical Sciences, UniMORE, lecturer: Prof. Andrea Cornia, academic year **2012/2013**
- **March – June 2014**: laboratory assistant for the Inorganic Chemistry course for bachelor students in Chemistry, UniMORE, lecturer: Prof. Ledi Menabue, academic year **2013/2014**
- **March – June 2014**: laboratory teacher for the Advanced Inorganic Chemistry course for master students in Chemical Sciences (6 CFU), UniMORE, academic year **2013/2014**
- **March – June 2015**: laboratory assistant for the Inorganic Chemistry course for bachelor students in Chemistry, UniMORE, lecturer: Prof. Ledi Menabue, academic year **2014/2015**
- **March – June 2015**: laboratory teacher for the Advanced Inorganic Chemistry course for master students in Chemical Sciences (6 CFU), UniMORE, academic year **2014/2015**
- **March – June 2016**: laboratory assistant for the Inorganic Chemistry course for bachelor students in Chemistry, UniMORE, lecturer: Prof. Ledi Menabue, academic year **2015/2016**
- **March – June 2016**: laboratory assistant for the Advanced Inorganic Chemistry course for master students in Chemical Sciences, UniMORE, lecturer: Prof. Andrea Cornia, academic year **2015/2016**
- **October 2016 – January 2017**: assistant lecturer for the General and Inorganic Chemistry course with Laboratory, bachelor's degree in Industrial Chemistry, Dipartimento di Chimica Industriale 'Toso Montanari', UniBO, lecturers: Prof. Valerio Zanotti, Prof.ssa Maria Carmela Iapalucci, Prof. Stefano Zacchini, academic year **2016/2017**
- **September 2017 – October 2017**: tutor for the Organic Chemistry I course for bachelor students in Chemistry, UniMORE, lecturer: Prof.ssa Emanuela Libertini, for preparing students to the final examination, academic year **2016/2017**

- **October 2017 – January 2018:** assistant lecturer for the General and Inorganic Chemistry course with Laboratory, bachelor's degree in Industrial Chemistry, Dipartimento di Chimica Industriale 'Toso Montanari', UniBO, lecturers: Prof. Valerio Zanotti, Prof. Maria Carmela Iapalucci, Prof. Stefano Zacchini, academic year **2017/2018**
- **October 2017 – December 2017:** tutor in support of the didactic activity of the students of the General Chemistry with Laboratory course for the 1st year of the bachelor's degree in Chemistry at UniMORE, lecturers: Prof. Gianluca Malavasi, Prof. Gianantonio Battistuzzi, academic year **2017/2018**
- **April 2018 – September 2018:** integrative teaching contract for the Organic Chemistry I course of the bachelor's degree in Chemistry, UniMORE, lecturer: Prof. Emanuela Libertini, academic year **2017/2018**
- **November 2018:** tutor in support of the didactic activity of the students of the General Chemistry with Laboratory course for the 1st year of the bachelor's degree in Chemistry at UniMORE, lecturers: Prof. Gianluca Malavasi and Prof. Gianantonio Battistuzzi, academic year **2018/2019**
- **March 2019 – June 2019:** teacher for the Higher Inorganic Chemistry Laboratory course for Master students in Chemical Sciences (6 CFU), UniMORE, academic year **2018/2019**
- **October 2019 – December 2019:** teacher for the General and Inorganic Chemistry Laboratory course for Bachelor students in Chemistry (3 CFU), UniMORE, academic year **2019/2020**
- **March 2020 – June 2020:** teacher for the Higher Inorganic Chemistry Laboratory course for Master students in Chemical Sciences (6 CFU), UniMORE, academic year **2019/2020**
- **September 2020 – December 2020:** teacher for the Chemistry Education and Communication course for Master students in Science Education and Communication (6 CFU), UniMORE, academic year **2020/2021**
- **October 2020 – December 2020:** teacher for the General and Inorganic Chemistry Laboratory course for Bachelor students in Chemistry (3 CFU), UniMORE, academic year **2020/2021**
- **March 2021 – June 2021:** teacher for the Higher Inorganic Chemistry Laboratory course for Master students in Chemical Sciences (6 CFU), UniMORE, academic year **2020/2021**
- **September 2021 – December 2021:** teacher for the Chemistry Education and Communication course for Master students in Science Education and Communication (6 CFU), UniMORE, academic year **2021/2022**
- **October 2021 – December 2021:** teacher for the General and Inorganic Chemistry Laboratory course for Bachelor students in Chemistry (3 CFU), UniMORE, academic year **2021/2022**
- **March 2022 – June 2022:** teacher for the Higher Inorganic Chemistry Laboratory course for Master students in Chemical Sciences (6 CFU), UniMORE, academic year **2021/2022**
- **September 2022 – December 2022:** teacher for the Chemistry Education and Communication course for Master students in Science Education and Communication (6 CFU), UniMORE, academic year **2022/2023**
- **October 2022 – December 2022:** teacher for the General and Inorganic Chemistry Laboratory course for Bachelor students in Chemistry (3 CFU), UniMORE, academic year **2022/2023**
- **September 2023 – December 2023:** teacher for the Chemistry Education and Communication course for Master students in Science Education and Communication (6 CFU), UniMORE, academic year **2023/2024**

- **October 2023 – December 2023:** teacher for the General and Inorganic Chemistry Laboratory course for Bachelor students in Chemistry (3 CFU), UniMORE, academic year **2023/2024**
- **September 2024 – December 2024:** teacher for the Chemistry Education and Communication course for Master students in Science Education and Communication (6 CFU), UniMORE, academic year **2024/2025**
- **October 2024 – December 2024:** teacher for the General and Inorganic Chemistry Laboratory course for Bachelor students in Chemistry (3 CFU), UniMORE, academic year **2024/2025**
- **September 2024 – January 2025:** teacher for the training courses for secondary school teachers for the competition classes A-028, A-034 and A-050, didactics in chemistry (8 CFU), academic year **2023/24**
- **June 2025 – October 2025:** teacher for the training courses for secondary school teachers for the competition classes A-028, A-034 and A-050, didactics in chemistry (8 CFU), academic year **2024/25**
- **September 2025 – December 2025:** teacher for the Chemistry Education and Communication course for Master students in Science Education and Communication (6 CFU), UniMORE, academic year **2025/2026**
- **October 2025 – December 2025:** teacher for the General and Inorganic Chemistry Laboratory course for Bachelor students in Chemistry (3 CFU), UniMORE, academic year **2025/2026**
- **February 2026 – April 2026:** teacher for the training courses for secondary school teachers for the competition classes A-028, A-034 and A-050, didactics in chemistry (8 CFU), academic year **2025/26**
- **2007 – present:** supervisor or assistant supervisor of 60 undergraduate Bachelor's and Master's students during their thesis training
- **November 2022 – October 2025:** Dott. Lorenzo Marchi's tutor during his doctorate (XXXVIII cycle) at the PhD Course in "Models and Methods for Material and Environmental Sciences"; thesis title: **Design and synthesis of dinuclear copper(II) complexes with salben ligands and their catalytic applications in Ullmann-type C–N coupling**, co-tutor: Dr. Serena Maria Fantasia, F. Hoffmann-La Roche Ltd, Basel, Switzerland.
- **November 2025 – present:** Dott. Stefano Baratti's tutor during his doctorate (XLI cycle) at the PhD Course in "Models and Methods for Material and Environmental Sciences"; research title: **Organometallic complexes bearing salmen and salben ligands and their application in catalysis**, co-tutor: Dr. Serena Maria Fantasia, F. Hoffmann-La Roche Ltd, Basel, Switzerland.

ACADEMIC DUTIES

- **January 2005 – October 2007:** PhD Student representative for Chemical Sciences and Industrial Chemistry Schools at the Dipartimento di Chimica Inorganica, Metallorganica e Analitica 'L. Malatesta', Università degli Studi di Milano
- **September 2007 – July 2011:** secretary and organizer of public events for the Chemistry-Orienting Committee (Commissione Orientamento dell'Area Chimica) at the Dipartimento di Chimica of UniMI, referent: Prof. Sandra Rondinini
- Promoter and supporter for the signing of the **Memorandum of Understanding for the Development of Collaborative Research Activities for Culture and Science & Technology** between the Università degli Studi di Modena e Reggio Emilia, Italy, and the Curtin University, Perth, Australia, validity: three+three (2016-2019 and 2019-2022) years. Representative for the

Dipartimento di Scienze Chimiche e Geologiche, UniMORE, of the Erasmus+ Extra-UE student exchange program with the Discipline of Chemistry, Curtin University, Perth, Australia (since **December 2018**)

- Person in charge for the organization of the online admission tests (**TOLC-B** distributed by CISIA – Consorzio Interuniversitario Sistemi Integrati per l'Accesso, Pisa, Italy) to the Bachelor's Degree in Chemistry, UniMORE (since **January 2019**)
- Member (since **February 2020**) and President (since **April 2022**) of the Commissione Tutorato for the Consiglio di Interclasse (CdI) of the Bachelor's in Chemistry and Master's in Chemical Sciences Courses of the Dipartimento di Scienze Chimiche e Geologiche, UniMORE.
- Member and secretary of the public selection Commission for the recruitment of n. 1 fixed-term researcher, pursuant to art. 24, paragraph 3, letter a) of Law 240/2010 (RDTa), in implementation of the measures envisaged by the National Recovery and Resilience Plan (PNRR) in the context of the Research and Innovation Program entitled "MUSA - Multilayered Urban Sustainability Action", of the Mission 4, Component 2, Investment 1.5 - Creation and strengthening of "Innovation ecosystems", construction of "territorial R&D leaders" (Cod. 022-RTDAPNRR-075/02), Competition sector: 03/B1 - Foundations of science chemistry and inorganic systems, scientific-disciplinary sector (SSD): CHIM/03 – General and inorganic chemistry, at the Dipartimento di Scienza dei Materiali of the Università degli Studi di Milano Bicocca (UniMIB); other members of the Commission: Prof. Roberto Scotti, UniMIB, and Prof. Maria Cristina Paganini, Università degli Studi di Torino (UniTO).
- Member of the Board of the Multidisciplinary Center for Teacher Training (Giunta del Centro Multidisciplinare per la Formazione degli Insegnanti) of UniMORE, and Director of the training course in Scienze e Tecnologie Chimiche, teaching class A-034 (since **November 2023**); vice coordinator of the Multidisciplinary Center for Teacher Training of UniMORE, coordinator: Prof. Federico Zannoni (since **Novembre 2025**).
- Delegate of the Third Mission and Referent for the Communication of the Dipartimento di Scienze Chimiche e Geologiche (DSCG), under the Head of Department Prof. Mauro Soldati (since **November 2024**).

AWARDS

- **2009**: winner of the ACT-ARIA Award 2009 to promote the scientific research between Italy and Australia with the project: **Hybrid coordination-organometallic systems for nonlinear optics** Prize released by the *Associazione per la promozione della Ricerca tra Italia e Australasia* of the Australian Capital Territory (ACT-ARIA)
- **2009**: winner of the SCI Award 2009 for best poster presentation at the XXIII Congresso Nazionale della Società Chimica Italiana (SCI 2009), Sorrento (NA), Italy, 5–10 July 2009, with the poster entitled: **cis and trans influences in Pt(PPh₃)₂ complexes**, authors: Luca Rigamonti, Michele Rusconi, Carlo Manassero, Mario Manassero, Alessandra Forni, Alessandro Pasini
- **2010**: winner of the International Picture Contest '**Everything is Chemistry**', scientific picture contest organized by the European Young Chemists Network (EYCN) in the occasion of the International Year of Chemistry 2011 (IYC 2011), prize received during the 3rd EuCheMS European Chemistry Congress, Nürnberg, Germany, 29 August – 2 September 2010
- **2018**: Italian National Scientific Enabling (ASN) for the position of Associate Professor (seconda fascia) in the sector 03/B1 (Fondamenti delle Scienze Chimiche e Sistemi Inorganici), validity: 07 August 2018 – 07 August 2027.

- **2026:** Italian National Scientific Enabling (ASN) for the position of Full Professor (prima fascia) in the sector 03/B1 (Fondamenti delle Scienze Chimiche e Sistemi Inorganici), validity: 26 May 2026 – 26 May 2038.

MEMBERSHIPS AND APPOINTMENTS

- Member of the Società Chimica Italiana (SCI), Inorganic Chemistry and Didactics Divisions (membership n° 15472). Treasurer of the Sezione Emilia Romagna of the Società Chimica Italiana (SCI-ER) for the **2021-2023** three-year period. Elected member and Treasurer of the Sezione Emilia Romagna of the Società Chimica Italiana (SCI-ER) for the **2024-2026** three-year period;
- Member of the American Chemical Society (ACS), (membership n° 30055363);
- Member of the Royal Society of Chemistry (MRSC), (membership n° 558523);
- Member of the Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali (INSTM), (membership n° 4570);
- Member of the Doctorate School ‘**Models and Methods for Material and Environmental Sciences (M3ES)**’ of the Università degli Studi di Modena e Reggio Emilia, Dipartimento di Scienze Chimiche e Geologiche (academic years: **2013/2014**, **2014/2015**, **2019/2020**, **2020/2021**, **2021/22**, **2022/23**, **2023/24**, **2024/25**, **2025/26**).
- Member of the RSC Researcher Grants Peer Review Group (since **April 2023**)

ORGANISATION OF SCIENTIFIC MEETINGS AND SCHOOLS

- Member of the Scientific Committee of the 3rd International Conference on Functional Molecular Materials (FUNMAT 2017), Krakow, Poland, 8–10 **November 2017**.
- Member of the Scientific and Organizing Committees of the XX Giornata della Chimica dell’Emilia Romagna 2021 (XX GdC-ER 2021), Ferrara, 17 **December 2021**.
- Member of the Scientific Committee of the Materials Science, Engineering & Technology International Conference (MSC 2022), Paris, France, 10–12 **August 2022**.
- Member of the Scientific and Organizing Committees of the XXIII Giornata della Chimica dell’Emilia Romagna 2024 (XXIII GdC-ER 2024), Modena, 19 **December 2024**.

ACTIVITIES IN REFERRED SCIENTIFIC JOURNALS

- Reviewer for the following International Journals (alphabetical order): ACS Omega, Applied Petrochemical Research, Applied Sciences, Chemical Communications, Chemistry - A European Journal, Chemistry – An Asian Journal, Chemistry Select, ChemPlusChem, Chinese Journal of Chemistry, Coordination Chemistry Reviews, Crystal Growth and Design, Crystals, CrystEngComm, Current Organic Chemistry, Dalton Transactions, European Journal of Inorganic Chemistry, Inorganica Chimica Acta, Inorganic Chemistry, Inorganics, International Journal of Physical Sciences, Journal of Inorganic and Organometallic Polymers and Materials, Journal of Molecular Structures, Journal of Physical Chemistry, Journal of the American Chemical Society, Magnetochemistry, Materials, Molecular Science, Molecules, New Journal of Chemistry, Polyhedron, Polymers, Reviews in Inorganic Chemistry, RSC Advances (since **2008**)

- Member of the Editorial Advisory Group of the Cambridge Scholars Publishing (CSP) (www.cambridgescholars.com) for books in the ‘Polymer Science’ area first and then ‘Chemistry’ area (since **October 2017**)
- Member of the Editorial Group of the International Journal **Materials** (MDPI, ISSN: 1996-1944) as Guest Editor for the Special Issue ‘**Trends in Nonlinear Optical Materials**’ (**March 2018 – August 2020**)
https://www.mdpi.com/journal/materials/special_issues/Nonlinear_Optical
- Member of the Editorial Group of the International Journal **International Journal of Molecular Sciences** (MDPI, ISSN: 1422-0067) as Guest Editor for the Special Issue ‘**Oligonuclear Metal Complexes with Schiff Base Ligands**’ (**February 2019 – November 2020**)
https://www.mdpi.com/journal/ijms/special_issues/Oligonuclear_Metal_Complexes
- Member of the Editorial Group of the International Journal **Catalysts** (MDPI, ISSN: 1422-0067) as co-Guest Editor for the Special Issue ‘**Ligand Design in Metal Chemistry: Reactivity and Catalysis**’, Guest Editor: Dr. Rita Mazzoni, UniBO (**March 2019 – October 2021**)
https://www.mdpi.com/journal/catalysts/special_issues/ligand_design_metal
- Member of the Editorial Group of the International Journal **International Journal of Molecular Sciences** (MDPI, ISSN: 1422-0067) as Guest Editor for the Special Issue ‘**Oligonuclear Metal Complexes with Schiff Base Ligands 2.0**’ (**December 2021 – June 2023**)
https://www.mdpi.com/journal/ijms/special_issues/Complexe_Schiff_Base2

SELECTED INVITED PRESENTATIONS

- **January 2009: Dinuclear copper(II) complexes with tridentate Schiff bases: magnetic studies** (2 h). Invited by Prof. Jan Reedijk, Universiteit Leiden, Leiden Institute of Chemistry, Leiden, The Netherlands, 20 January 2009
- **November 2017: Reversible pressure control on a zero-field pseudo-octahedral cobalt(II) single-molecule magnet** (20 mins). Invited oral presentation at the 3rd International Conference on Functional Molecular Materials (FUNMAT 2017), Krakow, Poland, 8–10 November 2017
- **The spin crossover phenomenon in transition metals: an active and actual research** (lesson of 2 h). Invited by Corso di Laurea Magistrale in Chimica Industriale (Master’s Degree in Industrial Chemistry) of the Corso di Chimica Inorganica con Laboratorio (Inorganic Chemistry with Laboratory course) at the Dipartimento di Chimica Industriale ‘Toso Montanari’, Università degli Studi di Bologna, Prof.ssa Maria Cristina Cassani and Prof. Stefano Zacchini, Bologna, Italy, for the academic years **2017/2018** (27 October 2017), **2018/2019** (26 October 2018), **2019/2020** (25 October 2019), **2020/2021** (30 October 2020), **2021/2022** (26 October 2021), **2022/2023** (25 October 2022), **2023/2024** (24 October 2023), **2024/25** (29 October 2024) and **2025/26** (28 October 2025).
- **June 2019: Nickel(II) complexes with unsymmetrically-substituted salen-type Schiff base ligands and their nonlinear optical features** (15 mins). Invited oral presentation at the XXVII International Conference on Coordination and Bioinorganic Chemistry (ICCBIC 2019), Smolenice, Slovakia, 2–7 June 2019
- **August 2022: Exploring the Magnetic Features of Cobalt(II) and Iron(II) Molecular Materials** (20 mins). Invited oral presentation at the Materials Science, Engineering & Technology International Conference (MSC 2022), Paris, France, 10–12 August 2022

BIBLIOMETRIC INDICATORS AND SCIENTIFIC PRODUCTION (2006-2025)

- **Source: Scopus**

Total number of publications in scientific journals: 58

Total number of citations: 1314

h-index: 23

Publications as First Author: 27 (47%)

Publications as Corresponding Author: 25 (43%)

Average number of citations per publication: 22.66

Average number of citations per year (2006-2026: 21 years): 62.57

- **Source: Web of Science (Clarivate)**

Total number of publications in scientific journals: 59

Total number of citations: 1266

h-index: 23

Publications as First Author: 27 (46%)

Publications as Corresponding Author: 25 (42%)

Average number of citations per publication: 21.46

Average number of citations per year (2006-2026: 21 years): 60.29

LIST OF SCIENTIFIC PUBLICATIONS

1. Rigamonti, Luca; Demartin, Francesco; Forni, Alessandra; Righetto, Stefania; Pasini, Alessandro **Copper(II) complexes of salen analogues with two differently substituted (push-pull) salicylaldehyde moieties. A study on the modulation of electronic asymmetry and nonlinear optical properties** *Inorg. Chem.* **2006**, *45*, 10976–10989, DOI: [10.1021/ic0613513](https://doi.org/10.1021/ic0613513).
2. Rigamonti, Luca; Forni, Alessandra; Pasini, Alessandro; Cinti, Antonio; Piovesana, Olivo **Copper(II) complexes of tridentate Schiff bases of salicylaldehydes and diamines. The role of the substituents and the diamine in the formation of mono, bi and trinuclear species. Crystal structures and magnetic properties** *Eur. J. Inorg. Chem.* **2008**, 3633–3647, DOI: [10.1002/ejic.200800372](https://doi.org/10.1002/ejic.200800372).
3. Rigamonti, Luca; Manassero, Carlo; Rusconi, Michele; Manassero, Mario; Pasini, Alessandro ***cis* influence in *trans*-Pt(PPh₃)₂ complexes** *Dalton Trans.* **2009**, 1206–1213, DOI: [10.1039/b813125b](https://doi.org/10.1039/b813125b).
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5. Babgi, Bandar; Rigamonti, Luca; Cifuentes, Marie; Corkery, Timothy; Randles, Michael; Schwich, Torsten; Petrie, Simon; Stranger, Robert; Teshome, Ayele; Asselberghs, Inge; Clays, Koen; Samoc, Marek; Humphrey, Mark **Length dependent convergence and saturation behavior of electrochemical, linear optical, quadratic nonlinear optical and cubic nonlinear optical properties of dipolar alkynylruthenium complexes with oligo(phenyleneethynylene) bridges** *J. Am. Chem. Soc.* **2009**, *131*, 10293–10307, DOI: [10.1021/ja902793z](https://doi.org/10.1021/ja902793z).

6. Cifuentes, Marie P.; Humphrey, Mark G.; Samoc, Marek; Babgi, Bandar; Dalton, Gulliver T., Rigamonti, Luca **Metal-containing oligo(phenylenethynylene)s: syntheses and nonlinear optical properties** *Polymer Preprints* **2009**, *50*, 515.
7. Rigamonti, Luca; Forni, Alessandra; Manassero, Mario; Manassero, Carlo; Pasini, Alessandro **Cooperation between cis and trans influences in cis-Pt^{II}(PPh₃)₂ complexes: structural, spectroscopic and computational studies** *Inorg. Chem.* **2010**, *49*, 123–135, DOI: [10.1021/ic901510m](https://doi.org/10.1021/ic901510m).
8. Rigamonti, Luca **Schiff base metal complexes for second order nonlinear optics** *La Chimica & L'Industria* **2010**, *92*(3), 118–122.
9. Rigamonti, Luca; Rusconi, Michele; Manassero, Carlo; Manassero, Mario; Pasini, Alessandro **Quantification of cis and trans influences in [PtX(PPh₃)₃]⁺ complexes. A ³¹P NMR study** *Inorg. Chim. Acta* **2010**, *363*, 3498–3505, DOI: [10.1016/j.ica.2010.07.002](https://doi.org/10.1016/j.ica.2010.07.002).
10. Rigamonti, Luca; Forni, Alessandra; Pievo, Roberta; Reedijk, Jan; Pasini, Alessandro **Synthesis, crystal structures and magnetic properties of dinuclear copper(II) compounds with NNO tridentate Schiff base ligands and bridging aliphatic diamine and aromatic diimine linkers** *Dalton Trans.* **2011**, *40*, 3381–3394, DOI: [10.1039/c0dt01304h](https://doi.org/10.1039/c0dt01304h).
11. Rigamonti, Luca; Rusconi, Michele; Forni, Alessandra; Pasini, Alessandro **The role of the atomic charges on the ligands and platinum(II) in affecting the cis and trans influences in [PtXL(PPh₃)₂]⁺ complexes (X = NO₃, Cl, Br, I; L = 4-substituted pyridines, amines, PPh₃). A ³¹P NMR and DFT investigation** *Dalton Trans.* **2011**, *40*, 10162–10173, DOI: [10.1039/c1dt10963d](https://doi.org/10.1039/c1dt10963d).
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