Curriculum Vitae

Valeria Amendola

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Born in Milano, 11th February 1974

1 Education

- **1997:** Laurea in Chemistry, University of Pavia, Five-year single-cycle degree, graduated *summa cum laude*
- **1997:** State Professional Qualification as a Chemist (Italy)
- **1997/98 – 1999/00:** Ph.D. in Chemical Sciences, University of Pavia (XIII Cycle). PhD scholarship funded by the Italian Ministry of University and Research (MUR). Final assessment : excellent (21th December 2000)
  - Thesis: *Transition Metal Ions in Supramolecular Chemistry*
  - Supervisor: Prof. Luigi Fabbrizzi
- **1997/98 – 1999/00:** Postgraduate Diploma, Advanced School of Integrated Training (SAFI), University School for Advanced Studies (IUSS) in Pavia. Study prizes awarded in all years of attendance at the IUSS School (1998–2000).

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2. Academic Appointments

Period	Position	Institution	Key Responsibilities & Research Focus
2015–Present	Associate Professor	University of Pavia & INSTM	Project management; international collaborations; research focus: development of molecular receptors, extractants, functional materials
2005–2015	Assistant Professor (Ricercatore)	University of Pavia	Teaching undergraduate chemistry; MSc and PhD supervision; Research on molecular receptors, anion sensors, supramolecular devices; Organizing Committee member, ISMSC 2007
2000–2004	Postdoctoral Fellow	University of Pavia	Supramolecular systems with transition-metal centers; controlled molecular motion; selective analyte recognition; molecular machines

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3. National Academic Qualification (Italy)

National Scientific Qualification (ASN) at Full Professor level, awarded through competitive national evaluation procedures in the following scientific sectors:

- **03/B1** – Foundations of Chemical Sciences and Inorganic Systems. Awarded in 2013; renewed in 2018 and 2025 (valid until 2037).
- **03/B2** – Chemical Foundations of Technologies. Awarded in 2025 (valid until 2037).

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4. International Mobility

2010 Short-term Visiting Scientist, Technical University of Munich (Germany)
Research: thermodynamics of molecular recognition via calorimetry.
Selected output: *Chemistry – A European Journal*, 2011, 17, 5972–5981

2012 – 2013 Visiting Scientist, University of Zurich, Switzerland
Research: molecular receptors and fluorescent chemosensors for pertechnetate.
Selected outputs: *Angewandte Chemie International Edition* 2012, 51, 9772–9776 **Cover Feature**, **highlighted in Nature Chemistry**; *Chemical Science* 2014, 5, 1820–1826.

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5. On-going Grants

Project Title: "CO_2: from a global problem to a tool to implement circularity – CO-Tool" (ID 6144755)
Funding source: Lombardy Region (ERDF 2021–2027) under the Collabora & Innova 2024 call.
Amount (Euros): Total project budget: €1,151,437.05; Funding allocated to the Pavia unit: €460,574.82.
Period: October 2025 - November 2027 (25 months)
Role: Principal Investigator (Partner unit)

Project Title: "Organic/Metal–Organic Composite Materials and Technologies for Water Treatment and Gas Separation - OMEGA" (Project No. 20224HH9KP)
Funding source: Italian Ministry of University and Research (MUR).
Amount (Euros): Total funding: €180,855; Funding allocated to the Pavia unit: €53,171.
Period: February 2025 - January 2027 (24 months)
Role of the PI: Principal Investigator (Partner unit)

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6. Completed projects

Project Title: "MOCA – Metal Organic Frameworks and Organic Cages for Highly Selective Gas Separation Membranes and Heavy Metal Capture Devices" (Grant No. 2019-2090), funded by Funding source: Cariplo Foundation (Circular Economy 2019 Call).

Amount (Euros): Total funding: €300,000; Funding allocated to the Pavia unit: €120,000.
Period: July 2020 - June 2023 (36 months)
Role of the PI: Principal Investigator (Leading unit)

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7. Research contracts & responsibilities

2018 – present: Head of the INSTM research unit in Pavia

- **2018- 2020: Research Contract** on the project: *"New Generation Separation Processes (PRONG)"*Contract renewals: 2018–2020 (total grant: 32,000.00€), funded by **CEA – Commissariat à l'Énergie Atomique, CEA-Marcoule, France.**

  2020 – 2022 (3-year project: 14,501.16€). Head of the INSTM-research unit at the Department of Chemistry of the University of Pavia for the project: "New Generation Separation Processes" focused on the development of new molecular receptors to be used in the selective separation of technetium from nuclear fuel.

- 2023 – 2025 (3-year project: 18,166.86€). Head of the INSTM-research unit at the Department of Chemistry of the University of Pavia for the project: "Materials for Recognition, Adsorption and Separation Processes", focused on the development of new materials for use in molecular recognition, sensing, adsorption, and selective separation of target analytes.

- 2026 – 2028 (3-year project: 8.166,86€ ; TRI.26/005): Head of the INSTM-research unit for the project: Enhanced Selective Materials for Environmental Applications (ESAME). The objective of the project is to improve the understanding of structure–property relationships in molecular materials relevant to separation processes.

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8. Participation in Research Projects

Member of the research unit - University of Pavia - for the following projects:

- **Network on Transition Metals in Supramolecular Catalysis**, Human Capital and Mobility Programme, European Union (1994–1998), Contract No. CHRX-CT94-0492
  • Participation period: 01/11/1997 – 30/09/1998

- **Targeted Project 2000 "Biotechnologies"**, Subproject "Biosensors and Diagnostic Biotechnologies", Topic: "Biosensors and Analytical Spectroscopy", Research Line: "Development of Innovative Microscopy Systems", Project title: *"Fluorescent Chemosensors for Amino Acids and Nucleosides"*, Local Coordinator: Prof. L. Fabbrizzi
  • Participation period: 05/03/1998 – 31/07/2002

- **COFIN 1999 "Supramolecular Devices"**, Participation in research activities of the University of Pavia group. Research programme of the unit: "Supramolecular devices generating signals: sensors and switches"
  • Participation period: 01/01/2000 – 31/12/2001

- **Research Training Network "Molecular Level Devices and Machines (MLDM)"**, 5th European Union Framework Programme (2000–2004), Contract No. HPRN-CT-2000-00029
  • Participation period: 01/09/2000 – 31/08/2004

- **PRIN 2001 "Supramolecular Devices"**, Participation in the research activities of Prof. L. Fabbrizzi's group. Research focused on the synthesis and characterization of

supramolecular systems containing transition metal centers, and on the study of molecular movements induced by chemical and electrochemical inputs
• Participation period: 01/11/2001 – 31/10/2003

- **PRIN 2006 "Supramolecular Systems for the Construction of Molecular Machines, Energy Conversion, Sensing, and Catalysis"**, Research unit programme at the University of Pavia: *Anion and Ion-Pair Recognition and Translocation*
  • Participation period: 01/02/2007 – 31/01/2009

- **Fondazione Cariplo 2009**, Call for Scientific and Technological Research on Advanced Materials; Project title: *"CO2 Photoconversion on Nanoparticles"*, University of Pavia, participation in the research unit activities. Project leaders: Prof. L. Fabbrizzi, Prof. A. Albini
  • Participation period: 01/01/2010 – 31/12/2012

- **PRIN 2008 "Supramolecular Systems for the Construction of Nanomachines, Signal Processing, Sensing, and Catalysis"**, Project leader Margherita Venturi (previously V. Balzani); • Participation period: 01/05/2010 – 30/09/2012

- **PRIN 2011 "Integrated Supramolecular Technologies for Chemical Information Processing: Advanced Molecular Devices and Materials (infoChem)"**, Scientific coordinator: M. Venturi
  • Participation period: 01/10/2012 – 28/02/2016

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7. Publications & Metrics

- Total publications: 103
- Total citations: > 6100
- h-index: 39 (Scopus, April 2026)
- See the list of publications in the Appendix

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8. Main Research Lines

My research focuses on the design and application of molecular receptors and supramolecular systems to control intermolecular interactions for molecular recognition, sensing, and separation processes with relevance to biomedicine, energy, and advanced materials.

Fundamental supramolecular chemistry and molecular recognition.
I investigate host–guest interactions in solution, with particular emphasis on hydrogen bonding and halogen bonding and their role in determining the structure, thermodynamics, and function of self-assembled systems. Through thermodynamic and spectroscopic studies, my work provides fundamental insight into molecular recognition mechanisms in aqueous and organic media.

Molecular receptors for biomedical sensing and diagnostics.
I develop organic and metal-based receptors for the selective recognition of biologically relevant anions and metabolites. By integrating fluorescent and chiral signaling units and exploiting indicator displacement strategies, I have introduced new sensing platforms for biomarkers of clinical relevance, including trans,trans-muconic acid, succinate, and fumarate. These studies have led to portable and on-site detection devices, including smartphone-based sensors, and were carried out in collaboration with leading international institutions (Universitat Politècnica de València; Mayo Clinic).

Selective separation of strategic anions and nuclear waste remediation.
My research has demonstrated, for the first time, the selective capture and sensing of the pertechnetate anion ($^{99}TcO_4^-$) using tailor-made molecular receptors. By combining hydrogen-bonding and electrostatic interactions, I developed receptors capable of selectively extracting $^{99}TcO_4^-$ from complex matrices, contributing to the advancement of next-generation nuclear fuel reprocessing technologies. This work was conducted in collaboration with CEA-Marcoule (France) within the ERC-relevant international project *PRONG*.

Innovative porous materials for CO_2 capture and separation.
I extend molecular recognition concepts to the solid state, designing porous molecular materials and membranes for selective CO_2 adsorption and separation from gas mixtures. This research addresses critical challenges in carbon capture and circular economy, and is supported by European (ERDF 2021–2027 Lombardy Region), national (MUR), and private funding (Cariplo Foundation).

Overall, my work bridges fundamental supramolecular chemistry and real-world applications, advancing molecular-level control over recognition and separation processes in complex environments.

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9. INTERNATIONAL COLLABORATIONS (2015 – Present)

University of Swansea, Swansea, **UK**: collaboration on the development of porous materials for CO_2 capture from gas mixtures (see Publications 91 and 101).

CEA-Marcoule, Bagnols-sur-Cèze, France: collaboration since 2018 on the development and optimization of liquid-liquid extraction processes for anions (see Publications 81, 86, 98); collaboration for the PhD project of Alexiane Thevenet at CEA-Marcoule.

Universitat Politècnica de València (UPV), Spain: collaboration on the development of chemosensing devices for the determination of tt-muconic acid (urinary biomarker of benzene) (see Publication 85).

University of Bristol, Bristol, UK: collaboration on the application of organic molecular cages for anion transport across biological membranes (see Publication 93).

School of Chemistry, Trinity College, Dublin, Ireland: collaboration within Erasmus Traineeships for MSc Chemistry students from the University of Pavia (theses of Anna Aletti and Francesca Pancotti) and on the study of anion receptors in solution (see Publication 79).

Mayo Clinic, Rochester, USA: collaboration on an MSc thesis (Riccardo Mobili) focused on a molecular cage for liquid-liquid separation and dicarboxylate anion sensing (see Publication 84).

Imperial College London, London, UK: collaboration within the Erasmus+ Traineeship project for the MSc thesis internship of Aaron Bernardino (University of Pavia); collaboration on the development of molecular materials for gas separation.

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10. PhD & Postdoctoral Supervision

I have supervised **five PhD students** (all completed) and **multiple postdoctoral researchers**, developing an independent research line with sustained attention to the training and career development of early-career scientists.

One former PhD student (G. Bergamaschi) received the Pulidori Prize (2013), a competitive national award for outstanding doctoral research in chemistry, and is currently a Research Scientist at SCITEC-CNR (Milan). Another former PhD student and post-doc researcher (R. Mobili) is currently a postdoctoral researcher at Sorbonne University (Paris).

Details on the supervised PhD projects (all funded by MUR):

Dr. Greta Bergamaschi (26th cycle, 01/11/2010 – 31/10/2013)
Thesis: “Anion recognition and sensing with urea-based receptors and azacryptands”
Pulidori Prize winner (2013)

Dr. Carlo Ciarrocchi (28th cycle, 01/11/2012 – 31/10/2015)
Thesis: “Anion receptors bearing metal centers: interaction and sensing”

Dr. Ana Miljkovic (30th cycle, 01/11/2014 – 31/10/2016)
Thesis: “Recognition processes based on molecular cages and tripodal receptors”

Dr. Sonia La Cognata (33rd cycle, 01/10/2017 – 30/09/2020)
Thesis: “(Supra)molecular systems for recognition, sensing and extraction processes”

Dr. Riccardo Mobili (35th cycle, 01/10/2019 – 30/09/2022)
Thesis: “Supramolecular systems for application in recognition and separation processes”

Postdocs supervised: with full scientific responsibility

Greta Bergamaschi (2013–2016; 3 consecutive years), present: Research Scientist at SCITEC-CNR (Milan).
Ana Miljkovic (2018–2020; 2 consecutive years)
Sonia La Cognata (2020–2023; 2025–present; 5 non-consecutive years), present: post-doc Researcher at the University of Pavia
Riccardo Mobili (2023–2024; 2 consecutive years), present: post-doc Researcher at the Sorbonne University (Paris)

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11. Teaching

- 20+ years of teaching undergraduates and graduates, Faculty of Science, University of Pavia; mentoring of international students through Erasmus+ programmes;
- 20+ years of mentoring and supervising summer internship students (secondary school).
- **2025-present**: coordinator of the **Teaching Innovation Project** (2024) for the Department of Chemistry (University of Pavia) concerning the basic chemistry teaching laboratories for the first year of science degree programs.

Present Courses

2009/10 - present: **Stoichiometry and Chemistry Laboratory** (12 ECTS, 108 hrs.), course for the Chemistry degree (1st-year); main topics: Reaction balance; determination of the molecular formula starting from the elemental analysis; weight ratios in the reactions; preparation of solutions; volumetric analysis; equilibria in the gas phase; acid-base equilibria; pH calculation; buffer solutions; behavior of ideal gases; precipitation reactions and solubility. The acquisition by the students of the above principles is assessed through written tests during the course.

During the practical exercises, students learn how to use the equipment and basic techniques of the chemical laboratory, and are involved in the synthesis and purification of inorganic/coordination compounds.
Teaching Evaluations – Last 3 Academic Years: **Average score ~ 8.6/10**

2014/15 - present: **Inorganic Chemistry III** (3 ECTS, 24 hrs.) core course in the field of inorganic and physical chemistry for the master's degree in Chemistry. The intermolecular interactions: hydrogen and halogen bond, σ and π donator-acceptor, metal-to-ligand. Crystal Field Theory and molecular orbital theory. C-based ligands, with species focus on carbene-metal complexes. Organic reactions based on metal complexes as catalysts. Mechanisms of Grubbs, Schrock catalysts. Cu(I) and Ru(II) complexes as catalysts in cycloaddition reactions. Cyclometalation. Mechanisms of substitution at the metal center. Lability and inertia of coordination compounds. Electron transfer processes: inner and outer sphere electron transfer. The Marcus theory. Absorption and emission spectroscopies. Fluorescence and phosphorescence. Ligand-centered and charge transfer excited states. Photo-induced electron transfer and energy transfer. Inorganic photochemistry. Transition metal complexes as photosensitizer. The molecular design of fluorescent sensors for metal ions, anions and amino acids. The coordination chemistry of anions: the interaction between receptor and anion, the metal-ligand interactions and hydrogen bonding. The template synthesis of rings, cages, rotaxanes, catenanes, propellers, grids. Notions of inorganic supramolecular chemistry. The control of the molecular movements: rotaxanes two stations, catenanes with no equivalent rings, scorpionates. molecular movements connected to photo-isomerization.
Teaching Evaluations – Last 3 Academic Years: **Average score ~ 9.9/10**

2014/15 - present: **Supramolecular Chemistry** (3 ECTS, 24 hrs.), core course in the field of inorganic and physical chemistry for the Master's degree in Chemistry; main topics: programmed systems; double and triple helicates, chirality and self-assembly: cooperativeness, self-recognition, double and triple chiral propellers; other multicomponent systems (containing metal cations): cylinders, racks, shelves. Intermolecular interactions, hydrogen and halogen bonding. Supramolecular machines and devices: synthesis and topology catenanes and rotaxanes; molecular motions, data storage at the molecular level, molecular electronics (machines and engines: shuttles, rotors, brakes); translocation cationic and signaling; hysteresis and molecular memories (self-assembling/disassembling). Characterization of supramolecular systems in solution (mass spectrometry, absorption and emission spectroscopy, NMR techniques) and examples. First and second level template effects. From cyclic helicates to supramolecular knots, synthetic strategies, and role of anions. Applications of supramolecular systems, such as nano-reactors (examples in the literature), thermodynamic role of supramolecular capsules (examples in the literature).
Teaching Evaluations – Last 3 Academic Years: **Average score ~9.8/10**.

Former teaching activity

2005/06 - 2008/09: **General and Inorganic Chemistry** (7 ECTS, 42 hrs.), Bachelor's Degree in Biology, University of Pavia. main topics: Atoms: atomic number and mass number, isotopes, radioactivity, atomic and molecular weight, molar mass. Atomic structure, orbitals, quantum numbers, energy and orbital filling. Electronic configuration. Periodic table and periodic properties. Nomenclature. Chemical bonding: ionic, covalent, and metallic bonding. Covalent bonding: diatomic molecules, sigma and pi bonds, geometry of polyatomic molecules, resonance, formal charges, structural formulas, exceptions to the octet rule, hybrid orbitals. Polarity in covalent bonds and dipole moment. Intermolecular forces, hydrogen bonding. Chemical reactions: reaction classes, stoichiometric coefficients, balancing, yield. States of matter. Mixtures: suspensions, colloids, and solutions. Liquid solutions: concentration, density,

dilution, titration, electrolyte solutions, colligative properties. Chemical kinetics. Chemical equilibrium: equilibrium constant, reaction quotient, Le Chatelier's principle. Acids and bases: Brønsted–Lowry theory, conjugate acid/base pairs, pH, Ka, hydrolysis, buffer solutions, polyprotic acids/bases, Lewis acids/bases, acid–base titrations, indicators. Solubility equilibria. Thermodynamics. Electrochemistry. Laboratory exercises: redox titration, acid–base titration, potentiometric determination of the pH of buffer solutions

2008/09: **Agricultural Chemistry** (2 ECTS, 16 hrs,) for the Faculty of Science; Soil Chemistry includes topics such as soil composition and mineralogy, soil pH and buffering capacity, cation exchange capacity (CEC), nutrient availability and mobility, and the role of soil organic matter and humus. Plant Nutrition covers essential macro- and micronutrients, nutrient uptake mechanisms, fertilizer requirements and nutrient deficiencies, as well as foliar feeding and nutrient diagnostics. Fertilizers and Soil Amendments.

2014/15: **Chemistry Education** (2 ECTS, 16 hrs.) for the training internship of high-school teachers; the course introduces key principles and methods for teaching chemistry in high school, focusing on curriculum design, learning objectives, and effective lesson planning. It explores models of chemical understanding, common student misconceptions, and strategies to support conceptual change. The program also covers laboratory activity design, inquiry-based learning, assessment methods, digital tools, and inclusive teaching practices.

2000/01-2004/05: Teaching of chemistry tutorials and problem-solving sessions for the courses of General and Inorganic Chemistry, Bachelor's Degrees in Biotechnology and Biology, University of Pavia. Tutoring and supervision in undergraduate teaching laboratories.

Thesis supervision activity

Bachelor's Degree Theses

2024/2025
Beatrice Raggi — "Metal–Organic Frameworks (MOFs) for the capture of perfluorinated substances."
2021/2022
Ester Cantoni — "Intrinsically porous materials for natural gas treatment"
2014/2015
Sonia La Cognata — "Electrochemically controlled self-assembling of helicates"
Elisa Massardi — "Fluorescent chemosensors for the determination of Zn(II) in pancreatic β-cells"
2011/2012
Ana Miljkovic — "The Role of Cordination Chemistry in the Development of Target- Specific Radiopharmaceuticals"

Master's Degree Theses

2024/2025
Beatrice Piaggi — "Development of molecular materials for carbon dioxide capture"
2022/2023
Laura Ghidoni — "Polymer based on triazolic complexes of divalent cations for the potential capture of fluoroquinolones"
Aaron H. Bernardino — "Automated approach to the synthesis of imido/imino cages and macrocycles"
2020/2021
Cesare Gallizioli — "Molecular cage in a mixed-matrix membrane for gas separation"
2019/2020
Clelia Cazzola — "Recognition and sensing of the fumarate anion in aqueous solution"

2018/2019
Riccardo Mobili — “Study of hydrophobic and hydrophilic dimetallic cryptates”
2017/2018
Federica Balduzzi — “Recognition of a benzene biomarker: study in aqueous and micellar solution”
Valentina Gazzola — “A supramolecular approach to the development of antibacterial surfaces”
2016/2017
Sonia La Cognata — “Julolidine-based semi(thio)carbazones as anion receptors”
From this thesis, the article “Anion-induced isomerization of fluorescent semi(thio)carbazones” was published in Organic Chemistry Frontiers (DOI: 10.1039/C7QO00805H).
2015/2016
Luciano Barluzzi — “Strategies for the synthesis of novel anion receptors based on halogen bonding.”
2014/2015
Leonardo Guglielmo — “Synthesis and study of the Cu_2Mozobil complex as an anion receptor”
Federico Novicelli — “Anthracene as a signaling unit in azacryptand receptors”
Nadia Rossi — “Bistren cryptand: Cu(II) complexation on the surface of gold nanostars”
Alessia Gesmundo — “Metal centers as structural elements in anion receptors”
Francesca Pancotti — “New Tröger’s bases and benzimidazolium ligands”
2013/2014
Stefania Marcheggiani — “New fluorescent cage: synthesis and solution studies”
Ana Miljkovic — “Study of commercial silicas functionalized with selective receptors for TcO_4^- ions”
2012/2013
Elisa Valeri — “Self-assembly and anion recognition”
Anna Aletti — “Synthesis of heterocycles assisted by urea: anion complexes”
Ivan Viviani — “Asymmetric Cu(II) cryptates: studies in aqueous solution”
2010/2011
Maria Stefania Ferrito — “Macrobicyclic receptors for the recognition of anionic radionuclides”
2006/2007
Greta Bergamaschi — “Interaction between dimetallic cryptates and anions in non- aqueous solvents”

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12. Editorial & Professional Service

2024 – Co-Editor of the themed collection “Supramolecular Sensors: From Molecules to Materials”, Sensors & Diagnostics, Royal Society of Chemistry.

2017 – present – Editorial Board Member, Frontiers in Chemistry, Frontiers Media SA, Switzerland.

2017 – present – Associate Editor, Molecules, MDPI, Basel, Switzerland.

2008 – present – Ad hoc scientific evaluator of research proposals and doctoral theses for national and international funding agencies and academic institutions, including:

ANR (France), IIT Palakkad (India), and several Italian universities (Cagliari, Padua, Perugia, Trieste, Urbino).

Ad hoc expert reviewer for high-impact international journals, including Nature Communications, Nature Reviews, Angewandte Chemie, Journal of the American Chemical Society, Small, Chemical Reviews**.**

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13. Selected Honors & Invited Talks

Honors and Recognitions

1. Fellow of the **Royal Society of Chemistry (FRSC)**
2. **Research Highlight** in *Nature Chemistry* 4, 772 (2012) ["Trapping Technetium" by Stuart Cantrill] for the publication:
   Alberto, R.; Bergamaschi, G.; Braband, H.; Fox, T.; Amendola, V. *$^{99}TcO_4^-$: Selective recognition and trapping in aqueous solution*, **Angew. Chem. Int. Ed.**, 2012, 51(39), 9772–9776; DOI: 10.1002/anie.201205313
3. Invited **Feature Article** in *Chemical Communications*:
   La Cognata, S.; Amendola, V. *Recent applications of organic cages in sensing and separation processes in solution*, **Chem. Commun.**, 2023, 59(92), 13668–13678; DOI: 10.1039/D3CC04522F
   Included in themed collections: Chemical Communications HOT Articles 2023 and Chemosensors and Molecular Logic
4. Invited **Concept Article** in *Chemistry – A European Journal*:
   La Cognata, S.; Marie, C.; Guilbaud, P.; Poggi, A.; Amendola, V. *Molecular Hosts for the Sensing and Separation of $^{99}TcO_4^-$*, **Chem. Eur. J.**, 2024, 30(42), e202401551; DOI: 10.1002/chem.202401551
5. Invited contribution to *RSC Sustainability*, Themed Collection on Circular Economy:
   Mobili, R.; Wu, Y.; Bezuidenhout, C. X.; La Cognata, S.; Bracco, S.; Carta, M.; Amendola, V. *Novel CO_2-Philic Porous Organic Polymers Synthesized in Water: A Leap towards Eco-Sustainability*, **RSC Sustainability**, 2024, 2, 3345–3352; DOI: 10.1039/D4SU00479E
6. Invited contribution to *Chemistry (MDPI)*:
   La Cognata, S.; Armentano, D.; Marchesi, N.; Grisoli, P.; Pascale, A.; Kieffer, M.; Taglietti, A.; Davis, A. P.; Amendola, V. *A Benzimidazolium-Based Organic Cage with Antimicrobial Activity*, **Chemistry**, 2022, 4(3), 855–864; DOI: 10.3390/chemistry4030061
7. Invited to feature research on the **Front Cover and Cover Profile** in *Chemistry – A European Journal*, 2022, 28, e202202357; DOI: 10.1002/chem.202202357
8. Invited contribution to *ChemPlusChem*:
   La Cognata, S.; Miljkovic, A.; Mobili, R.; Bergamaschi, G.; Amendola, V. *Organic Cages as Building Blocks for Mechanically Interlocked Molecules: Towards Molecular Machines*, **ChemPlusChem**, 2020, 85(6), 1145–1155; DOI: 10.1002/cplu.202000274
9. Invited **Forum Article** for *Inorganic Chemistry*, Issue: Self-Assembled Cages and Macrocycles:
   Amendola, V.; Miljkovic, A.; Legnani, L.; Toma, L.; Dondi, D.; Lazzaroni, S. *Self-Assembly of Pseudorotaxane Structures from a Dicopper(II) Molecular Cage and Dicarboxylate Axles*, **Inorg. Chem.**, 2018, 57(7), 3540–3547; DOI: 10.1021/acs.inorgchem.7b02534
10. Invited contribution to *Supramolecular Chemistry*, Special Issue: Women in Supramolecular Chemistry:
    Amendola, V.; Bergamaschi, G.; Miljkovic, A. *Azacryptands as molecular cages for anions and metal ions*, **Supramol. Chem.**, 2018, 30(4), 236–242; DOI: 10.1080/10610278.2017.1339885

11. Invited contributions to **SPR – Photochemistry (RSC)**, Chapters in Volumes 43, 45, 47, 49, 51 (6 chapters, 2015–2023)

- **Vol. 43 (2015):** Amendola, V.; Bergamaschi, G.; Licchelli, M. *Photochemical and photocatalytic properties of transition metal compounds*, pp. 103–147
- **Vol. 45 (2017):** Amendola, V.; Bergamaschi, G. *Photochemical and photocatalytic properties of transition metal compounds*, pp. 101–132
  Amendola, V. *Photophysics of transition metal complexes*, pp. 133–162
- **Vol. 47 (2019):** Amendola, V. *Photophysics of transition metal complexes (2017–2018)*, pp. 217–240
- **Vol. 49 (2021):** Mobili, R.; Amendola, V. *Photophysics of transition metal complexes (2019–2020)*, pp. 147–176
- **Vol. 51 (2023):** La Cognata, S.; Dhanalakshmi, V.; Poggi, A.; Dondi, D.; Amendola, V. *Photophysics of transition metal complexes (2021–2022)*, pp. 194–226

Invited Talks, Conference Organization and Participation

- **Invited Lecture**, VII National Congress of Supramolecular Chemistry, Florence, Italy, 04–07/09/2005
  Title: *"Anion recognition based on electrostatic and hydrogen binding interactions"*
- **Organizing Committee Member**, 2nd International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC 2007), Salice Terme, Italy, 24–28/06/2007
- **Invited Speaker**, ISMEC 2013, Burgos, Spain, 16–20/06/2013
  Title: *"A fluorescent sensor for $^{99}TcO_4^-$ in water"*
- **Organizing Committee Member**, ISMEC 2014, Pavia, Italy, 08–12/06/2014
- **Invited Oral Communication**, MASC-2015, University of Durham, UK, 21–22/12/2015
  Title: *"Molecular cages on solid supports and nanomaterials"*
- **Plenary Lecture**, IUPAC Global Women's Breakfast 2019, Rende, Italy, 12/02/2019
  Title: *"Women behind the periodic table"*
- **Invited Oral Communication**, 1st WISC Workshop – Women in Supramolecular Chemistry, Cagliari, Italy, 06–08/09/2021
  Title: *"Azacryptands: versatile molecular cages for recognition and separation processes"*
- **Invited Oral Communication**, MSMLG 2022 – 7th International Conference on Molecular Sensors and Molecular Logic Gates, Dublin, Ireland, 12–15/07/2022
  Title: *"Recent applications of Organic Cages in Sensing and Separation Processes"*
- **Organizing Committee Member**, Supramol 2024, XVI National Congress of Supramolecular Chemistry, Pavia, Italy, 10–13/09/2024
- **Invited Oral Communication**, ISNSC 2024 – XIII International Symposium on Nano & Supramolecular Chemistry, S. Margherita di Pula, Italy, 06–09/10/2024
  Title: *"Molecular Cages in CO_2 Separation Applications"*
- **Member of the Scientific Steering Committee**, National Congress of Supramolecular Chemistry, University of Pavia, 31/10/2024–present

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14. Selected Publications

Mobili, R., La Cognata, S., Monteleone, M., Longo, M., Fuoco, A., Serapian, S.A., Vigani, B., Milanese, C., Armentano, D., Jansen, J.C., Amendola, V.
Gas Permeation through Mechanically Resistant Self-Standing Membranes of a Neat Amorphous Organic Cage
(2023) Chemistry - A European Journal, 29 (56), art. no. e202301437
DOI: 10.1002/chem.202301437

N. citations: 7 (Scopus, Dec. 2025), Cover Feature: DOI: 10.1002/chem.202302814

La Cognata, S., Mobili, R., Milanese, C., Boiocchi, M., Gaboardi, M., Armentano, D., Jansen, J.C., Monteleone, M., Antonangelo, A.R., Carta, M., Amendola, V.
CO2 Separation by Imide/Imine Organic Cages
(2022) Chemistry - A European Journal, 28 (49), art. no. e202201631
DOI: 10.1002/chem.202201631
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Pavia, 07nd April 2026

Valeria Amendola

(Digitally signed)