

# CURRICULUM VITAE

Marianna Marchini

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H-index **11** (Google Scholar) **11** (Scopus) **11** (Web of Science)  
Citations **634** (Google Scholar) **552** (Scopus) **532** (Web of Science)

## Professional experience

**Junior assistant professor (fixed-term) at University of Bologna, Chemistry Department (December 2022-present)**

Research topic: replication of ancient procedures from the Arabic technical literature  
The research activity is part of the project ERC Consolidator Grant 101043939 *UseFool. Knowledge and manipulation of nature between usefulness and deception in the Arabo-Islamic tradition (9th–15th century)*, principal investigator Prof. Lucia Raggetti, University of Bologna, Department of Philosophy and Communication Studies.

**Postdoctoral researcher at University of Bologna, Chemistry Department (May 2019–December 2022)**

Supervisor: Prof. Lucia Maini

Research topic: reproduction of alchemical recipes

The research activity is part of the project ERC-2016-CoG “Alchemy in the Making: From ancient Babylonia via Graeco-Roman Egypt into the Byzantine, Syriac and Arabic traditions (1500 BCE -1000 AD)” (*AlchemEast*), principal investigator Prof. Matteo Martelli, University of Bologna, Department of Philosophy and Communication Studies.

**Postdoctoral researcher at University of Bologna, Chemistry Department  
(January 2017–May 2019)**

Supervisor: Prof. Paola Ceroni

Research topic: supramolecular system for energy conversion and photocatalysis

**Cultore della Materia in Chemistry**

Approval of the Council of the Degree Course in Primary Teacher Education,  
University of Bologna (13<sup>th</sup> December 2021).

## Education

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**6 CFU Bio/05, University of Pisa**

(3<sup>th</sup> February 2022)

Elements of biological sciences for teaching

**24 CFU Educational Path, University of Bologna**

(June 2018)

Anthropology (6 CFU); General Education Methodologies and Technologies (6 CFU);

Psychology (6 CFU); Pedagogy, Special Pedagogy and Inclusive Education (6 CFU).

Attended and completed the 4-hours e-learning course **Module 1 – Safety general training** (leg. Decree 81/08 art. 37, and the state-regions agreement of 21/12/2011)  
(14<sup>th</sup> January 2019).

Attended and completed e-learning course **Training in radiation protection**  
(delivered in accordance with art. 111 point 1, 2, 3 and 4 D.Lgs. 101/2020).

(14<sup>th</sup> October 2019).

**PhD student in Chemistry, University of Bologna**

(January 2014–December 2016, defend May 2017)

Supervisor: Prof. Paola Ceroni

Research topic: photoactive molecules in supramolecular system and photocatalysis

Certification of “Doctor Europaeus”

**Master degree in “Photochemistry and Molecular Materials”, University of Bologna**

(October 2011–July 2013)

110/110 cum laude

Thesis in “*Supramolecular system based in pyridylpyridinium units: optical properties and encapsulation in cucurbiturils*”

Supervisor: Prof. Paola Ceroni

**Bachelor degree in “Chemistry and Material Chemistry”, University of Bologna**

(September 2008–July 2011)

110/110

Thesis in “*Rotational spectrum in supersonic expansion of THF-Kr: conformation and surface potential energy of internal motion*”.

Supervisor: Prof. Walter Caminati

**High School Diploma, Liceo Scientifico “Enrico Medi”, Senigallia, Italy**

(September 2003–July 2008)

95/100

## Publication

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1. “AgX-based hybrid coordination polymers: mechanochemical synthesis, structure and luminescent properties characterization”  
C. Zuffa, C. Cappuccino, M. Marchini, L. Contini, F. Farinella, L. Maini, *Faraday Discussion*, **2022**, DOI: 10.1039/x0xx00000x
2. “Exploring the ancient chemistry of mercury”  
M. Marchini, M. Gandolfi, M. Maini, L. Raggetti, M. Martelli, *PNAS*, **2022**, 119 (24), <https://doi.org/10.1073/pnas.2123171119>.
3. “Novel Cu(I)-5-nitropyridine-2-Thiol Cluster with NIR Emission: Structural and Photophysical Characterization”  
K. Hassanein, C. Cappuccino, M. Marchini, E. Bandini, M. Christian, V. Morandi, F. Monti, L. Maini, B. Ventura, *J. Phys. Chem. C*, **2022**, 126, 24, 10190–10198
4. “A Photoredox Nozaki-Hiyama Reaction Catalytic in Chromium”  
F. Calogero, S. Potenti, G. Magagnano, G. Mosca, A. Gualandi, M. Marchini, P. Ceroni, P.G. Cozzi, *Eur. J. Org. Chem.*, **2022**, e202200350 (1 of 5).
5. “Acceleration of oxidation promoted by laccase irradiation with red light”  
V. Giraldi M. Marchini, M. Di Giosia, A. Gualandi, M. Cirillo, M. Calvaresi, P. Ceroni, D. Giacomini, P.G. Cozzi, *New J. Chem.*, **2022**, 46, 8662-8668.
6. “Synthesis, Structure, Photophysics, and Singlet Oxygen Sensitization by a Platinum(II) Complex of Meso-Tetra-Acenaphthyl Porphyrin”

- A. Garai, M. Villa, M. Marchini, S.K. Patra, T. Pain, S. Mondal, P. Ceroni, S. Kar, *Eur. J. Inorg. Chem.*, **2021**, 4089–4095.
7. “Understanding the mechanism of direct visible-light-activated [2+2] cycloadditions mediated by Rh and Ir photocatalysts: combined computational and spectroscopic studies”  
H. Jung, M. Hong, M. Marchini, M. Villa, P.S. Steinlandt, X. Huang, M. Hemming, E. Meggers, P. Ceroni, J. Park, M.-H. Baik, *Chem. Sci.*, **2021**, 12, 9673-9681.
  8. “Catalytic Photoredox Allylation of Aldehydes Promoted by a Cobalt Complex”  
A. Gualandi, G. Rodeghiero, R. Perciaccante, T. P. Jansen, C. Moreno-Cabrerizo, C. Foucher, M. Marchini, P. Ceroni, P.G. Cozzi, *Adv. Synth. Catal.*, **2021**, 363, 1105-1111.
  9. “Luce e colore: un laboratorio a distanza per Scienze della Formazione Primaria”  
M. Marchini, M. Venturi, *Chimica nella scuola 2*, **2021**, 36-37.
  10. “Tailored Coumarin Dyes for Photoredox Catalysis: Calculation, Synthesis, and Electronic Properties”  
A. Gualandi, A. Nenov, M. Marchini, G. Rodeghiero, I. Conti, E. Paltanin, M. Balletti, P. Ceroni, M. Garavelli, P.G. Cozzi, *ChemCatChem*, **2021**, 13, 981 – 989.
  11. “Giant Shape-Persistent Tetrahedral Porphyrin System: Light-Induced Charge Separation”  
M. Marchini, A. Luisa, G. Bergamini, N. Armaroli, B. Ventura, M. Baroncini, N. Demitri, E. Iengo, P. Ceroni, *Chem. Eur. J.*, **2021**, 27, 1-11.
  12. “A supramolecular bifunctional iridium photoaminocatalyst for the enantioselective alkylation of aldehydes”  
A. Gualandi, F. Calogero, A. Martinelli, A. Quintavalla, M. Marchini, P. Ceroni, M. Lombardo, P.G. Cozzi, *Dalton Trans.*, **2020**, 49, 14497-14505.
  13. “Aluminum(III) Salen Complexes as Active Photoredox Catalysts”  
A. Gualandi, M. Marchini, L. Mengozzi, H. T. Kidanu, A. Franc, P. Ceroni, P.G. Cozzi, *Eur. J. Org. Chem.*, **2020**, 2020(10), 1486–1490.
  14. “The Beauty and Pleasure of Understanding: Engaging with Contemporary Challenges Through Science Education”

- C. Bulgarelli, B. Mantovani, M. Marchini, B. Pecori, F. Plazzi, F. Prada, G. Tasquier, M. Venturi, *Proceedings of ESERA 2019*, 1375.
15. "Other nitrogen heterocycles: Carbazoles, imides and PDI, mpg-C<sub>3</sub>N<sub>4</sub>, tetrazines, riboflavin, and BODIPY"  
P.G. Cozzi, P. Ceroni, A. Gualandi, M. Marchini, *Catalytic Science Series*, **2019**, 18, 423-469.
  16. "Allylation of aldehydes by dual photoredox and nickel catalysis"  
A. Gualandi, G. Rodeghiero, A. Faraone, F. Patuzzo, M. Marchini, F. Calogero, R. Perciaccante, T. P. Jansen, P. Ceroni, P. G. Cozzi *Chem. Commun.*, **2019**, 54 (48), 6838-6841.
  17. "Asymmetric [3+2] Photocycloadditions of Cyclopropanes with Alkenes or Alkynes through Visible-Light Excitation of Catalyst-Bound Substrates" X. Huang, J. Lin, T. Shen, K. Harms, M. Marchini, P. Ceroni, E. Meggers *Angew. Chem. Int. Ed.*, **2018**, 57 (19), 5454-5458.
  18. "Mechanistic insights into two-photon-driven photocatalysis in organic synthesis"  
M. Marchini, A. Gualandi, L. Mengozzi, P. Franchi, M. Lucarini, P. G. Cozzi, V. Balzani, P. Ceroni *Phys. Chem. Chem. Phys.*, **2018**, 20 (12), 8071-8076.
  19. "Application of coumarin dyes for organic photoredox catalysis"  
A. Gualandi, G. Rodeghiero, E. Della Rocca, F. Bertoni, M. Marchini, R. Perciaccante, T. P. Jansen, P. Ceroni, P. G. Cozzi *Chem. Commun.*, **2018**, 54 (72), 10044-10047.
  20. "Insegnare Scienze: qualche considerazione metodologica, ma non solo"  
M. Venturi, M. Marchini *Annali online della Didattica e della Formazione Docente*, **2017**, vol 9 (n° 14), 280-293.
  21. "Photoredox catalysis: the need to elucidate the photochemical mechanism"  
M. Marchini, G. Bergamini, P. G. Cozzi, P. Ceroni, V. Balzani *Angew. Chem. Int. Ed.*, **2017**, 56 (42), 12820-12821.
  22. "Photocatalytic ATRA reaction promoted by iodo-Bodipy and sodium ascorbate"  
G. Magagnano, A. Gualandi, M. Marchini, L. Mengozzi, P. Ceroni, P. G. Cozzi *Chem. Commun.*, **2017**, 53 (10), 1591-1594.

23. “Hierarchical Growth of Supramolecular Structures Driven by Pimerization of Tetrahedrally Arranged Bipyridinium Units”  
M. Marchini, M. Baroncini, G. Bergamini, P. Ceroni, M. D’Angelantonio, P. Franchi, M. Lucarini, F. Negri, T. Szreder, M. Venturi, *Chem. Eur. J.*, **2017**, 23 (26), 6380-6390.
24. “Visible-Light-Induced Direct Photocatalytic Carboxylation of Indoles with CBr<sub>4</sub>/MeOH”  
Q.-Q. Yang, M. Marchini, W.-J. Xiao, P. Ceroni, M. Bandini *Chem. Eur. J.*, **2015**, 21 (50), 18052-18056.
25. “Organocatalytic Enantioselective Alkylation of Aldehydes with [Fe(bpy)<sub>3</sub>]Br<sub>2</sub> Catalyst and Visible Light”  
A. Gualandi, M. Marchini, L. Mengozzi, M. Natali, M. Lucarini P. Ceroni, P. G. Cozzi *ACS Catal.*, **2015**, 5 (10), 5927–5931
26. “A highly luminescent tetramer from a weakly emitting monomer: Acid- and redox-controlled multiple complexation by cucurbit[7]uril”  
G. Bergamini, A. Fermi, M. Marchini, M. Locritani, A. Credi, M. Venturi, F. Negri, P. Ceroni, M. Baroncini *Chem. Eur. J.*, **2014**, 20 (23), 7054-7060.
27. “Rotational spectrum and internal dynamics of tetrahydrofuran-krypton”  
Q. Gou, G. Feng, L. Evangelisti, A. Maris, M. Marchini, B. Velino, W. Caminati *ChemPhysChem.*, **2012**, 13 (1), 221-225.

## Online publication and blog’s articles

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- “Light and color: A virtual laboratory for future pre-school and primary school teachers”, **ChemEd X**, <https://www.chemedx.org/blog/light-and-color-virtual-laboratory-future-pre-school-and-primary-school-teachers>
- “Alchemy: esoteric practice or protoscience? Ancient recipes put to test in modern laboratories”, **UniboMagazine**, <https://magazine.unibo.it/archivio/2022/07/05/alchemy-esoteric-practice-or-protoscience-ancient-recipes-put-to-test-in-modern-laboratories>

## University and Society

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- Show title “Una coppia improbabile: quando la chimica incontra l’alchimia” for the event *La Notte dei Ricercatori 2022* (Bologna 30 September 2022).

- Presentation title “Chimica e alchimia: la coppia improbabile” fo the event *Pint Of Science* (Bologna, 11 May 2022) <https://pintofscience.it/event/la-coppia-improbabile-quando-la-chimica-incontra-lalchimia>
- Show title “La chimica per il Pianeta: ma che spettacolo” for the event *La Notte dei Ricercatori 2021* (Bologna 24 September 2021).
- Online seminar “*Antropocene: per noi cosa cambia?*” as part of series of meetings organized by the teacher-student group "Environment, Education and Sustainability" from the Department of education, University of Bologna (15 April 2021).
- Interview for the episode "*An explosive chemistry*" of *Bella Scienza!* (LeoSCIENZA) on the importance of Chemistry (27 March 2021). <https://www.youtube.com/watch?v=MmvosSai1EA>
- Member of the group “*Conoscere la Chimica*” since February 2021.

## Research stays

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### **ETH Zürich, Prof. A. Dieter Schlüter**

**(August 2015–December 2015)**

Research topic: syntehsis and AFM/SEM analysis of a 2D polymer, based on a porphyrinic monomer, with Langmuir-Blodgett trough approach

## Partecipation and collaboration in scientific project

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- **2022-present** ERC Consolidator Grant 101043939 entitled “*UseFool. Knowledge and manipulation of nature between usefulness and deception in the Arabo-Islamic tradition (9th–15th century)*” as team member.
- **2019-2022** ERC Consolidator Grant (2017-2022) entitled “*Alchemy in the Making: From ancient Babylonia via Graeco-Roman Egypt into the Byzantine, Syriac and Arabic traditions (1500 BCE – 1000 AD)* (AlchemEast) as team member.
- **2018** Overheads Firb Nanosolar (RBAP11C58Y\_006) as team member.
- **2017-2019** ERC Proof of Concept (2017-2019) entitled “*Luminescent silicon nanocrystals as bioimaging systems*” (SiNBioSys) as team member.
- **2013-2017** ERC Starting Grant (2012-2017) entitled “*Silicon nanocrystals coated by photoactive molecules: a new class of organic-inorganic hybrid materials for solar energy conversion*” (PhotoSi) as team member.

## Grants and awards

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- “Prof G. P. Spada Medal Award” for best PhD Thesis in the Inorganic Chemistry Section (February 2017).
- Marco Polo grant (Univ. of Bologna) – Funding the research stay at ETH Zürich, in the Institute of Polymers in Prof. A. Dieter Schlüter’s group (October 2015).

## Participation to conferences, schools and workshops

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1. Participation to the joint workshop between the ERC Projects *AlchemEast* (Bologna), *DURARE* (Utrecht), *UseFool* (Bologna) entitled “Yellow Dyes, an interdisciplinary workshop”, November 30-December 2, 2022, Bologna, Italy
2. 4<sup>th</sup> Joint AIC-SILS Conference, September 12-15, 2022, Trieste, Italy.  
Oral presentation “Grinding in the old times: the synthesis of cinnabar through the glass of ancient recipes” in the section “Science & Society: from Dissemination to Communication”.
3. Participation to the summer school “ONSCI 2022 - Officina di Narrazione della Scienza”, September 7-14, 2022, Bologna, Italy.
4. 10th International Conference on Mechanochemistry and Mechanical Alloying 2022 (INCOME 2022) June 6-10, 2022, Cagliari, Italy.  
Oral presentation “Grinding in the old times: the synthesis of cinnabar through the glass of ancient recipes” in the section History (*commemoration*).
5. Online participation to the training course entitled “*Project AdSWiM: Do you Sea?*” organized by and promoted by the project - “AdSWiM - Managed use of treated urban wastewater for the quality of the Adriatic Sea” -- European Cross-border Cooperation Program Interreg Italy-Croatia 2014-2020, from 21-01-2021 to 08-06-2021.
6. La Didattica a Distanza (DAD) e la Chimica, November 16-18, 2020, Online meeting.  
Oral presentation (*Luce e colore: un laboratorio a distanza per Scienze della Formazione Primaria*).



7. Part of the Scientific and organizing committee of the “Whorkshop L’alfabeto della natura: Chimica per la Formazione Primaria”, November 15-19, 2019, Roma, Italy.  
Oral presentation (*Laboratori trasversali di scienze per la formazione primaria*).
8. Gordon Research Conference on Photochemistry: Light-Driven Reactions, Materials and Devices, July 14-19, 2019, Easton, Massachusetts, USA.  
Poster presentation (*Allylation of Aldehydes by Dual Photoredox and Nickel Catalysis*).
9. UK-IT joint meeting on Photochemistry, June 24-26, 2019, Lipari, Italy.  
Oral presentation (*Allylation of Aldehydes by Dual Photoredox and Nickel Catalysis*).
10. Website creation and Secretaryship to VIII Ciamician Photochemistry School” (CPS19), June 10-14, 2019, Bologna, Italy.
11. XLVI National Conference of Inorganic Chemistry of the Italian Chemical Society (SCI 2018), September 10-13, 2018, Bologna, Italy.  
Oral presentation (*Metal Complexes in Photocatalytic Reactions*).
12. Photoredox Catalysis for novel Organic Reactions, Beilstein Organic Chemistry Symposium, April 24-26, 2018, Potsdam, Germany.  
Poster presentation (*Organocatalytic enantioselective alkylation of aldehydes with [Fe(bpy)<sub>3</sub>]Br<sub>2</sub> catalyst and visible light*).
13. Italian Photochemistry Meeting 2017, December 14-16, 2017, Perugia, Italy.  
Oral presentation (*Photochemical investigation on the mechanism of photoredox reactions promoted by visible light*).
14. XXVI National Conference of the Italian Chemical Society, September 10-14, 2017 in Paestum (SA), Italy.  
Oral presentation (*Tetrahedral arrays of metallo-porphyrins*).
15. 28<sup>th</sup> International Conference on Photochemistry, July 16-21, 2017 in Strasbourg, France.  
Oral presentation (*Photochemical Investigation on the Mechanism of Photoredox Reactions Promoted by Visible Light*).
16. Phototrain Innovative Training and Network first workshop, May 24-26, 2017 at ICIQ Tarragona, Spain.

17. Participation to the event “I Giganti della Fotochimica”, on February 2, 2017, Sala Ulisse, Accademia delle Scienze, Bologna, Italy.
18. First Joint Congress of the French and Italian Photochemists and Photobiologists, September 19-22, 2016 in Bari, Italy.  
Oral presentation (*Pimerization drives supramolecular polymerization of a shape-persistent tetrahedral molecule bearing four bipyridinium units*).
19. 6<sup>th</sup> EuCheMS Chemistry Congress, September 11-15, 2016, Siviglia, Spain.  
Oral presentation (*Tetrahedral arrays of metallo-porphyrins*).
20. Assistant at 7° Corso nazionale di introduzione alla fotochimica, June 6-10, 2016, Bologna, Italy.
21. Central European Conference on Photochemistry (CECP 2016), February 14-18, 2016, Bad Hofgastain, Austria.  
Poster presentation (*Tetrahedral arrays of metallo-porphyrins*).
22. Italian Photochemistry Meeting 2015, December 17-18, 2015 Bologna, Italy.  
Oral presentation (*Tetrahedral arrays of metallo-porphyrins*).
23. 1° Meeting of Italian Users of Atomic Force Microscopy (1° AFMeeting 2015, Bruker) February 24-25, 2015 Milan, Italy.
24. Italian Photochemistry Meeting 2014, November 26-27, 2014, Milan, Italy.  
Oral presentation (*A photo- and electroactive shape-persistent tetrahedral molecule constituted by four pyridylpyridinium units*).
25. XXV National Conference of the Italian Chemical Society 2014, September 07-12, 2014, Cosenza, Italy.  
Oral presentation (*A photo- and electroactive shape-persistent tetrahedral molecule constituted by four pyridylpyridinium units*).
26. II meeting FIRB Nanosolar, February 17-18, 2014, Ferrara, Italy.  
Oral presentation (*A photo- and electroactive shape-persistent tetrahedral molecule constituted by four pyridylpyridinium units*).
27. Participation to 6° Corso nazionale di introduzione alla fotochimica, June 3-6, 2013, Bologna, Italy.

## Teaching activities

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### Workshop and Seminar

- Summer School “Matter: Philosophy, Science, and the Arts”, 27-28-29 June 2022, for students holding a bachelor, graduate students and PhD students. Title: *Replicating ancient alchemical recipes in modern laboratories*, Hands-on session in the laboratory of the Department of Chemistry (29 June 2022).
- Doctoral teaching cycle of seminars “Making Science Happen”, Title: *How to observe nature in the lab?* (25 May 2022, replications of ancient (al)chemical practices in modern laboratories, hands-on session @ U.E. 5 lab P2 Graphite, Navile District).
- Online seminar (26 November 2021) given by Lucia Maini, Marianna Marchini and Matteo Martelli in the framework of the “*Turba discussion group*”, organized by Jo Hedesan (University of Oxford) in collaboration with the Society of the History of Chemistry and Alchemy (SHAC).  
<https://www.youtube.com/watch?v=WreUfqj7KGs&feature=youtu.be>

### Adjunct Professor

- Elements of Ecology - Laboratory activity, single cycle degree programme in Primary teacher education (3rd year undergraduate students). University of Bologna AY 2021/2022, in progress, ca. 300 students.
- Elements of Ecology - Laboratory activity, single cycle degree programme in Primary teacher education (3rd year undergraduate students). University of Bologna AY 2020/2021, in progress, ca. 300 students.
- Elements of Chemistry and Chemistry Teaching (integrated course, 4CFU, 24 h), single cycle degree programme in Primary teacher education (3rd year undergraduate students). University of Bologna AY 2020/2021, ca. 300 students.
- Elements of Ecology - Laboratory activity, single cycle degree programme in Primary teacher education (3rd year undergraduate students). University of Bologna AY 2019/2020, in progress, ca. 300 students.
- Elements of Chemistry and Chemistry Teaching (integrated course, 4CFU, 24 h), single cycle degree programme in Primary teacher education (4rd year

undergraduate students). University of Bologna AY 2018/2019, ca. 300 students.

- Elements of Ecology - Laboratory activity, single cycle degree programme in Primary teacher education (3rd year undergraduate students). University of Bologna AY 2018/2019, in progress, ca. 300 students.

## **Tutor**

- Coordination Chemistry with Laboratory - Laboratory assistant, first cycle degree programme in Chemistry and Materials Chemistry (2nd year undergraduate students). University of Bologna AY 2019/2020, in progress, ca. 80 students.
- Coordination Chemistry with Laboratory - Laboratory assistant, first cycle degree programme in Chemistry and Materials Chemistry (2nd year undergraduate students). University of Bologna AY 2018/20219, ca. 80 students.
- Elements of Ecology - Laboratory assistant (16 h), single cycle degree programme in Primary teacher education (4rd year undergraduate students). University of Bologna AY 2017/2018.
- Coordination Chemistry with Laboratory - Laboratory assistant, first cycle degree programme in Chemistry and Materials Chemistry (2nd year undergraduate students). University of Bologna AY 2017/2018.
- Elements of Ecology - Laboratory assistant (16 h), single cycle degree programme in Primary teacher education (4rd year undergraduate students). University of Bologna AY 2016/2017.
- Coordination Chemistry with Laboratory - Laboratory assistant, first cycle degree programme in Chemistry and Materials Chemistry (2nd year undergraduate students). University of Bologna AY 2016/2017.
- Elements of Ecology - Laboratory assistant (16 h), single cycle degree programme in Primary teacher education (4rd year undergraduate students). University of Bologna AY 2015/2016.

- Coordination Chemistry with Laboratory - Laboratory assistant (32 h), first cycle degree programme in Chemistry and Materials Chemistry (2nd year undergraduate students). University of Bologna AY 2014/2015.
- Elements of Ecology - Laboratory assistant (16 h), single cycle degree programme in Primary teacher education (4th year undergraduate students). University of Bologna AY 2014/2015.
- General and Inorganic Chemistry – exercises (60 h), School of Pharmacy, Biotechnology and Sport Science (undergraduate students from different programmes). University of Bologna AY 2013/2014.

## Supervision

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- Single cycle degree in “Primary Teacher Education” University of Bologna. Title: *L’Acquario in classe: un progetto interdisciplinare per la scuola primaria*. Student: *Rossella Rimondi* (AY 2020-2021, co-supervision with Prof. Federico Plazzi).
- Master thesis in “Photochemistry and Molecular Materials”, University of Bologna. Title: *Studio e caratterizzazione fotofisica di un catalizzatore biologico e un colorante organico elettroattivo nell’ambito della fotocatalisi*. Student: *Francesco Falciani* (AY 2019-2020, II session, co-supervision with Prof. Paola Ceroni).
- Single cycle degree in “Primary Teacher Education” University of Bologna. Title: *VIAGGIO ALLA SCOPERTA DELLE TRASFORMAZIONI CHE CI CIRCONDANO: un percorso didattico in continuità tra la Scuola Primaria e la Scuola dell’Infanzia*. Student: *Camilla Lama* (AY 2019-2020, co-supervision with Prof. Margherita Venturi).
- Single cycle degree in “Primary Teacher Education” University of Bologna. Title: *DIRE, FARE, SPERIMENTARE: IL BAMBINO SCIENZIATO NATO. La Scienza nella Scuola dell’Infanzia: un Progetto Didattico per bambini di cinque anni*. Student: *Federica Versaci* (AY 2018-2019, co-supervision with Prof. Margherita Venturi).
- Single cycle degree in “Primary Teacher Education” University of Bologna. Title: *IL DIARIO DELLO SCIENZIATO: ALLA SCOPERTA DELL’ACQUA. Un percorso di didattica laboratoriale applicato nella scuola primaria*. Student: *Giulia Vandelli* (AY 2018-2019, co-supervision with Prof. Margherita Venturi).

- Master thesis in “Photochemistry and Molecular Materials”, University of Bologna. Title: *Iodinated BODIPYs as photosensitizers for CO<sub>2</sub> reduction*. Student: *Elena Bassan* (AY 2018-2019, II session, co-supervision with Prof. Paola Ceroni).
- Master thesis in “Photochemistry and Molecular Materials”, University of Bologna. Title: *Synthesis and characterization of an iridium(III) photocatalyst for the reduction of CO<sub>2</sub>*. Student: *Veronica Pasini* (AY 2017-2018, II session, co-supervision with Prof. Paola Ceroni).
- Bachelor thesis in “Chemistry and Materials Chemistry”, University of Bologna. Title: *Studio fotofisico di derivati del diazapirenio e interazione con cucurbit[8]urile*. Student: *Bibiana Fabri* (AY 2016-2017, I session, co-supervision with Prof. Paola Ceroni).
- Bachelor thesis in “Chemistry and Materials Chemistry”, University of Bologna. Title: *Studio fotofisico e calorimetrico di un sistema host-guest fotoattivabile*. Student: *Elena Bassan* (AY 2016-2017, I session, co-supervision with Prof. Paola Ceroni).
- Master thesis in “Photochemistry and Molecular Materials”, University of Bologna. Title: *Studio e caratterizzazione fotofisica di complessi di rutenio con leganti ciano e dipiridile: applicazioni in photoredox catalysis*. Student: *Serena Paolelli* (AY 2016-2017, III session, co-supervision with Prof. Giacomo Bergamini).
- Master thesis in “Photochemistry and Molecular Materials”, University of Bologna. Title: *Control of the intermolecular pimerization process for a bipyridium-based tetramer*. Student: *Lorenzo Petrolli* (AY 2016-2017, III session, co-supervision with Prof. Margherita Venturi).
- Bachelor thesis in “Chemistry and Materials Chemistry”, University of Bologna. Title: *Studio fotofisico in soluzione acquosa di un chemosensore per nucleotidi basato su unità piridinpiridinio*. Student: *Margherita Taddei* (AY 2015-2016, II session, co-supervision with Prof. Giacomo Bergamini).
- Bachelor thesis in “Chemistry and Materials Chemistry”, University of Bologna. Title: *Studio fotofisico della formazione di sistemi supramolecolari di rutenio porfirine e molecole basate su unità piridil-piridinio*. Student: *Veronica Pasini* (AY 2014-2015, II session, co-supervision with Prof. Paola Ceroni).

## Language skills

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Italian      mother tongue  
English     fluent

## Technical skills and competences

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### **Techniques of chemical analysis**

Spectrophotometry (very good)

Spectrofluorimetry (very good)

Transient absorption spectroscopy (very good)

Time-Resolved Fluorescence (very good)

Cyclic Voltammetry and Bulk electrolysis (very good)

Spectroelectrochemistry (good)

Dynamic Light Scattering (good)

Gamma ray irradiation (very good)

Langmuir-Blodgett trough (very good)

Atomic Force Microscopy (good)

Powder X-ray diffraction (good)

### **System software**

Operating system: Windows (very good), Linux (good), Mac OS (very good)

Office software: Microsoft Office (very good), Open Office (good), Libre office (good)

Technical software: MatLab (good), Gaussian 09 (good), ChemBioOffice (good),

Specfit (very good)

## Social and organization skills

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Acquired good skills in teamwork and coordination of the research projects during the training period and the research activity carried out during the PhD and PostDoc. Good teaching skills developed during the tutoring activities and working as adjunct professor.