Dr. Andrea Fermi

Curriculum Vitae

PERSONAL INFORMATION

Affiliation: Dipartimento di Chimica "G. Ciamician", Università di Bologna
via Selmi 2, 40126 - Bologna, Italy
Email: andrea.fermi2@unibo.it
Scopus ID: 54961378400
ORCID ID: 0000-0003-1080-0530
Personal webpage: **link**

EDUCATION

- **April 2013**: PhD in Chemical Sciences, University of Bologna, Italy, and Aix-Marseille Université, France. Joint Phd Programme of the French-Italian University ("Vinci Program" framework). Co-supervisors: prof. Paola Ceroni (Italy) and prof. Marc Gingras (France). Thesis title: *"Polysulfurated aromatic compounds: synthesis and photophysical properties"*. Research focused on the synthesis of new poly- and persulfurated aromatic compounds, their characterization, analysis of their photophysical properties and their use as building blocks in multichromophoric supramolecular polymers.
- **October 2009**: MSc (*Laurea Specialistica*) in Chemistry, University of Pavia, Italy. Final mark: 110/110 *cum laude*, ECTS equivalent: A; supervisor: prof. Luigi Fabbrizzi. Experimental research in Supramolecular Chemistry, defending a thesis on thermodynamic aspects of the interaction between anions and neutral receptors in solution.
- **December 2007**: BSc (*Laurea Triennale*) in Chemical Sciences, University of Pavia, Italy. Final mark: 110/110, ECTS equivalent: A. Thesis in Supramolecular Chemistry studying the anion templated synthesis of basic molecular machines like rotaxanes and catenanes. Supervisor: prof. Maurizio Licchelli.

RESEARCH EXPERIENCE

- **4 Septemper 2023 - present:** Senior Researcher (*"Ricercatore a tempo determinato - tipo B"*; SSD: CHEM-03/A), University of Bologna, Department of Chemistry, Laboratory of Photochemical Nanosciences.
- **7 January 2021 - 3 Septemper 2023:** Junior Researcher (*"Ricercatore a tempo determinato - tipo A"*; SSD: CHIM/03; SC: 03/B1), University of Bologna, Department of Chemistry, Laboratory of Photochemical Nanosciences.
- **December 2018 - December 2020:** post-doctoral research associate, University of Bologna, Italy (supervisor: prof. Giacomo Bergamini). Design and photophysical analysis of organic and inorganic species for application in photocatalytic reactions (funding by the Italian *Ministero dell'Università e della Ricerca*).
- **October 2016 - May 2018:** post-doctoral research associate, Cardiff University, United Kingdom (supervisor: prof. Davide Bonifazi). Development and photophysical characterisation of polypeptide-based chromophores for the conversion of solar energy.

From April 2017, in the framework of the MSCA-RISE "INFUSION" project, international scientific exchange with "Mediteknology SRL", Bologna, Italy (supervisor: Dr. Giovanna Barbarella). Design, development and characterization of new oligo- and polythiophene-based chromophores for application in new generation electrochromic devices.

- **May 2015 - October 2016:** post-doctoral research associate at Université de Namur, Belgium (supervisor: prof. Davide Bonifazi). In the context of the "FLYCOAT" project, development and engineering of new bio-inspired hybrid materials for energy conversion and storage (in collaboration with "H2WIN SA", Belgium).
  From october 2015, in the context of the ERC project "COLORLANDS", investigations on the photophysical and electrochemical properties of new classes of chromophores for the development of light-harvesting systems and for photocatalysed chemical transformations (in collaboration with Cardiff University, United Kingdom).
- **January 2013 - December 2014:** post-doctoral research associate (24 months grant) at University of Bologna, Italy. In the framework of the ERC starting grant "PhotoSi", investigations on the photophysical properties of silicon nanoparticles, developing a series of covalently decorated hybrids as functional materials for antenna-based devices, under the supervision of prof. Paola Ceroni.
- **January 2010 - December 2012:** PhD student at University of Bologna, Italy (21 months) and Aix-Marseille Université (15 months).
- **March-July 2009:** Visiting student at the ECPM, CNRS-University of Strasbourg, France. Research activities for the MSc grade Thesis with the supervision of Dr. Françoise Arnaud.

RESEARCH PROJECTS, FUNDING AND FELLOWSHIPS

- **PRIN-P2022PZ2MM**: *" ENgineering LIGHT-activated materials for the abatement of ENvironmentally hazardous and pollutING substances" (ENLIGHTENING)*
  Beneficiaries and partners: Università di Bologna, Università di Parma, Università di Torino (Italy).
  Principal investigator: **Dr. Andrea Fermi**.
  Funding: Ministero dell'Università e della Ricerca.
- **PRIN-2022AWXS83**: *"PHOTOactive aerophobic hydroGels for hydrogEN generation in molecular-based photoelectrosynthetic cells" (PHOTOGEN)*
  Beneficiaries and partners: Università di Bologna, Università di Ferrara, Università di Messina (Italy).
  Local coordinator: **Dr. Andrea Fermi**.
  Funding: Ministero dell'Università e della Ricerca.
- **H2020-Twinning of Research Institutions "Biomass4Synthons"**: *"Straightening training, research and innovation capacities in the valorization of bio-renewable resource"*
  Beneficiaries and partners: Faculdade de Farmácia da Universidade de Lisboa (Portugal), Associação Blc3-Campus De Tecnologia E Inovação (Portugal), Università di Bologna (Italy), Spartax Chemicals, Lda (Portugal), Institute Of Organic Chemistry of the Bulgarian Academy Of Sciences (Bulgaria), Sorbonne Université (France), Universität Wien (Austria), Eindhoven University Of Technology (Netherlands).
  Local coordinator: prof. Pier Giorgio Cozzi.
  Funding: European Commission.
- **H2020-RIA "CONDOR"**: *"COmbined suN-Driven Oxidation and CO2 Reduction"*
  Beneficiaries and partners: University of Bologna (Italy), ICIQ (Spain), CNR (Italy), Universiteit

Utrecht (Netherlands), Università di Ferrara (Italy), ENGIE (France), Laborelec (Belgium), HYGEAR BV (Netherlands), Amires s.r.o. (Czechia), University of North Carolina (USA).
Local coordinator: prof. Paola Ceroni.
Funding: European Commission.

- **MSCA-ITN "PhotoReAct"**: *"Photocatalysis as a tool for synthetic organic chemistry"*
  Beneficiaries and partners: University of Bologna (Italy), Universiteit van Amsterdam (Netherlands), University of St Andrews (UK), Universität Leipzig (Germany), Institute of Organic Chemistry - Polish Academy of Sciences (Poland), Universität Zürich (Switzerland), University of Manchester (UK), CNRS (France), Università di Pavia (Italy), Universität Münster (Germany), Ecosynth (Belgium), Johnson Matthey PLC (UK), ComInnex Zrt. (Hungary), Janssen Cilag SA (Spain).
  Local coordinator: prof. Paola Ceroni.
  Funding: European Commission.
- **MSCA-ITN "PhotoTrain"**: *"Entrepreneuring dynamic self-organized interfaces in photocatalysis: a multidisciplinary training network converting light into products"*
  Beneficiaries and partners: University of Bologna (Italy), Cardiff University (UK), CNR-IFN (Italy), ICIQ (Spain), University of Trieste (Italy), Katholieke Universiteit Leuven (Belgium), Technion (Israel), Elvesys (France), Dr. Reddy's Laboratories Ltd. (UK), A.P.E. Research SRL (Italy), IOCD (international), ICTP (International), SINCHEM (International).
  Coordinator: prof. Giacomo Bergamini.
  Funding: European Commission.
- **"Self-organized photoactive systems for photocatalysis"**: post-doctoral research project at Department of Chemistry "G. Ciamician", University of Bologna.
  Coordinator: prof. Giacomo Bergamini.
  Funding: Ministero dell'Università e della Ricerca.
- **MSCA-RISE "INFUSION"**: *"Engineering optoelectronic INterfaces: a global action intersecting FUndamental conceptS and technology implementatION of self-organized organic materials"*
  Beneficiaries and partners: Cardiff University (UK), CNR (Italy), Universidade NOVA de Lisboa (Portugal), YNVISIBLE SA (Portugal), Mediteknology SRL (Italy), A.P.E. Research SRL (Italy), Université de Namur (Belgium), University of Karachi (Pakistan), Universidad Nacional de La Plata (Argentina).
  Local coordinator: prof. Davide Bonifazi, Cardiff University.
  Funding: European Commission.
- **ERC "COLORLANDS"**: *"COLOR Ordering Templated by Hierarchized Supramolecular Porous FlatLANDS"* .
  Principal investigator: prof. Davide Bonifazi, Université de Namur (Belgium) and Cardiff University (UK).
  Funding: European Commission.
- **FLYCOAT:** *"Résines biosourcées nanorenforcées pour coatings sur aluminium: du procédé de production 'solvent-free' aux applications durables et multifonctionnelles dans le transport"*
  Beneficiaries and partners: Université de Namur, Katholieke Universiteit Leuven, Université de Liège, Université Libre de Bruxelles (Belgium).
  Local coordinator: prof. Davide Bonifazi, Université de Namur (Belgium).
  Funding: Région Wallonie (Belgium).
- **ERC "PHOTOSI"**: *"Silicon nanocrystals coated by photoactive molecules: a new class of organic-inorganic hybrid materials for solar energy conversion"*

Principal investigator: prof. Paola Ceroni, University of Bologna (Italy).
Funding: European Commission.

- **PRIN 20085ZXFEE**: *"Sistemi supramolecolari per la conversione dell'energia solare"*
  Local coordinator: prof. Paola Ceroni.
  Funding: Ministero dell'Università e della Ricerca.
- **"Marco Polo" fellowship**: visiting PhD student at Aix-Marseille Université.
  Funding: University of Bologna.
- **Vinci Fellowship**: PhD student for the joint "Vinci programme" of the Franco-Italian University.
  Coordinators: prof. Paola Ceroni (University of Bologna) and prof. Marc Gingras (Aix-Marseille Université).
  Funding: Franco-Italian University (intergovernmental).
- **Collegio Ghislieri fellowship**: visiting student at EPCM-CNRS, Strasbourg, France.
  Funding: Collegio Ghislieri, Pavia, Italy.

TEACHING AND TUTORING

- September 2023 - present: lecturer for the course "Biomimetic Supramolecular Chemistry" (48 hours, MSc "Photochemistry and Molecular Materials", 2nd year; SSD: CHIM/03, 6 CFU) at the Department of Chemistry "G. Ciamician", University of Bologna.
- June 2022: lecturer at the "IX Ciamician Photochemistry School" (topic: *Bimolecular dynamic quenching and photoinduced energy transfer*), 6-10 June 2022, Bologna, Italy.
- September 2021 - December 2022: lecturer for the course "Advanced Supramolecular Chemistry" (36 hours, MSc "Photochemistry and Molecular Materials", 2nd year; SSD: CHIM/03, 6 CFU) at the Department of Chemistry "G. Ciamician", University of Bologna.
- February 2021 - present: lecturer for the course "Laboratory of Coordination Chemistry" (32 hours, BSc *"Chimica e Chimica dei Materiali"*, 2nd year; SSD: CHIM/03, 1 CFU) at the Department of Chemistry "G. Ciamician", University of Bologna.
- Supervisor of 4 BSc student at the University of Bologna (2022–23). Co-supervisor of 1 undergraduate student for BSc thesis (2013) and 6 Master students for MSc thesis at the University of Bologna (2012, 2020–2022); 1 BSc student at Aix-Marseille Université (2011).
- November 2019 - July 2020: teaching tutor for the course "General Chemistry" (50 hours, BSc *"Tecnologie per il territorio e l'ambiente agro-forestale"*, 1st year; SSD: CHIM/03) at the Department of Agricultural and Food Sciences, University of Bologna (main teacher: prof. Enrico Rampazzo).
- Since December 2017: mentoring and tutoring activities for BSc and MSc Chemistry students of the Collegio Ghislieri, Pavia, as *alumnus* of the same institution.
- Day-to-day advisor for 5 PhD students at Cardiff University (2016-2017).

ACHIEVEMENTS AND AWARDS

- *Abilitazione Scientifica Nazionale* (national scientific qualification), issued on October 3rd 2022 (2nd level, SSD: CHIM/03, SC: 03/B1; validity: until October 3rd 2033).
- Highlighted as *Outstanding Reviewer* for 2023 by the editorial board of *Chemical Science*: *Chem. Sci.* **2024**, *15*, 12634.
- *Chem. Eur. J.* **2024**, *30*, e202401768: rated as "Hot Paper" by the journal Editorial Office.

- *Adv. Synth. Catal.* **2024**, *366*, 798-805: rated as "Hot Paper" by the journal Editorial Office.
- *Eur. J. Org. Chem.* **2023**, *26*, e202300421: highlighted on the journal front cover.
- *Best poster* award at the XLIX Congresso Nazionale di Chimica Inorganica (Società Chimica Italiana), 12–15 September 2023, Perugia, Italy.
- *Angew. Chem. Int. Ed.* **2022**, *61*, e202114981: rated as Top Downloaded Article (first 12 months from publication) by the journal Editorial Office.
- *Adv. Synth. Catal.* **2022**, *364*, 3410–3419: rated as Top Downloaded Article (10% most downloaded papers in 2023) by the journal Editorial Office.
- *Adv. Synth. Catal.* **2022**, *364*, 3410–3419: rated as VIP (Very Important Publication) by the journal Editorial Office.
- *Eur. J. Org. Chem.* **2021**, *11*, 1624: rated as Top Downloaded Article (first 12 months of publication) by the journal Editorial Office.
- *Nanoscale Horiz.* **2021**, *6*, 676-695: selected for a *Horizons Community Board collection* focussing on optical and photonic materials and devices.
- *Eur. J. Org. Chem.* **2021**, *11*, 1624-1627: highlighted on *ChemistryViews*, the online science news magazine of *Chemistry Europe*, and on the journal cover.
- *Eur. J. Org. Chem.* **2020**, *45*, 6955-6965: rated as VIP (Very Important Paper) by the journal Editorial Office.
- *Chem. Eur. J.* **2016**, *22*, 5665–5675: rated as "Hot Paper" by the journal Editorial Office and highlighted on the journal back cover.
- *J. Mater. Chem. C*, **2013**, *1*, 2717–2724: selected to be featured in a virtual issue on *J. Mater. Chem. C*, celebrating the 20th anniversary of Aggregation Induced Emission on journals edited by the Royal Society of Chemistry.
- *Chem. Eur. J.* **2014**, *20*, 10661-10668: highlighted on the journal back cover.
- *J. Am. Chem. Soc.* **2014**, *136*, 6395–6400: highlighted in 2014 on "*Noteworthy Chemistry*", an on-line feature produced by the American Chemical Society that collects and summarizes innovative ideas from a larger body of chemical literature. The same paper was highlighted at national level by the French National Research Center (CNRS).
- 2014 C'NANO prize for best PhD thesis in Nanosciences and Nanotechnology, from the Nanosciences division of the French National Research Council (CNRS), Région Provence-Alpes-Côte d'Azur.

MEMBERSHIPS AND ORGANIZATION OF SCIENTIFIC EVENTS

- **2024**: "C^3-day 2024", Center for Chemical Catalysis (C^3), University of Bologna, 4 June 2024; organizing committee.
- **2023**: "Contest for Chemical Catalysis", Center for Chemical Catalysis (C^3), University of Bologna, 18 April 2023; organizing committee.
- **2022**: "IX Ciamician Photochemistry School", University of Bologna, 6-10 June 2022; organizing committee.
- **2019**: "VIII Ciamician Photochemistry School", University of Bologna, 10-14 June 2019; organizing committee.
- **2013**: "VI Ciamician Photochemistry School", University of Bologna, 3-6 June 2013; organizing committee.
- Member of the interdepartmental "Center of Chemical Catalysis" (C^3) at the University of Bologna.
- Member of the Italian Chemical Society.

- Member of the Italian Group of Photochemistry.

OTHER SCIENTIFIC ACTIVITIES AND PEER REVIEWING

- Guest Editor for a *Spotlight Collection* on *Dalton Transactions* (topic: *"Aggregation induced luminescence of metal complexes"*), launched in April 2022.
- Referee for international peer-reviewed journals: ACS Catalysis, ACS Sustainable Chemistry & Engineering, Advanced Optical Materials, Angewandte Chemie International Edition, ChemCatChem, Chemical Communications, Chemical Science (*Outstanding Reviewer 2023*; *Reviewer Spotlight*, July 2023), Chemistry European Journal, Dalton Transactions, Dyes and Pigments, Journal of the American Chemical Society, Journal of Physical Chemistry, New Journal of Chemistry, Photochem.

PUBLICATIONS

P39. A. Fracassa, F. Calogero, G. Pavan, P. Nikolaou, **A. Fermi**, P. Ceroni, F. Paolucci, P. G. Cozzi, T. Scattolin, N. Demitri, A. Gualandi, A. Aliprandi, G. Valenti, *"Tunable electrochemiluminescence of TADF luminophores: manipulating efficiency and unveiling water-soluble emitters"*, *Chem. Sci.* **2024**, *Chem. Sci.* **2024**, *15*, 17892.

P38. M. Villa, **A. Fermi**, F. Calogero, X. Wu, A. Gualandi, P. G. Cozzi, A. Troisi, B. Ventura, P. Ceroni, *"Organic super-reducing photocatalysts generate solvated electrons via two consecutive photon induced processes"*, *Chem. Sci.* **2024**, *15*, 14739.

P37. F. Calogero, L. Wilczeck, E. Pinosa, A. Gualandi, R. Dorta, A. Herrera, Y. Dai, A. Rossignol, F. Negri, Z. Ziani, **A. Fermi**, P. Ceroni, P. G. Cozzi, *"Stable Meisenheimer Complexes as Powerful Photoreductants Readily Obtained from Aza-Heteroaromatic Compounds"*, *Angew. Chem. Int. Ed.* **2024**, 63, e202411074.

P36. **A. Fermi***, S. D'Agostino, Y. Dai, F. Brunetti, F. Negri, M. Gingras, P. Ceroni, *"Unravelling the Role of Structural Factors in the Luminescence Properties of Persulfurated Benzenes"*, *Chem. Eur. J.* **2024**, *30*, e202401768.

P35. I. A. S. Campos, **A. Fermi**, B. Ventura, C. A. F. Moraes, G. H. Ribeiro, T. Venâncio, P. Ceroni, R. M. Carlos, *"Modulation of the excited states of Ruthenium(II)-perylene dyad to access near-IR luminescence, long-lived perylene triplet state, and singlet oxygen photosensitization"*, *Inorg. Chem.* **2024**, *63*, 10, 4595.

P34. E. Pinosa, Y. Gelato, F. Calogero, M. M. Moscogiuri, A. Gualandi, **A. Fermi**, P. Ceroni, P. G. Cozzi, *"Dual photoredox catalysis with vanadium complexes in low oxidation state: a highly diastereoselective pinacol coupling"*, *Adv. Synth. Catal.* **2024**, *366*, 798.

P33. M. A. Bryden, M. Villa, **A. Fermi**, P. Ceroni, E. Z. Colman, *"Dual Photosensitizer Cycles Working Synergistically in a C(sp)-C(sp3) Cross-Coupling Reaction"*, *Asian J. Org. Chem.* **2023**, *12*, e202300347.

P32. **A. Fermi***, P. Ceroni, I. R. Laskar, *"Aggregation Induced Emission of metal complexes: advances and perspectives"*, *Dalton Trans.* **2023**, *52*, 10637 – editorial.

P31. E. Pinosa, A. Gualandi, **A. Fermi**, P. Ceroni, P. G. Cozzi, F. Calogero, *"A dual photoredox and Cp_2TiCl_2 catalyzed apporach for the direct access to α-vinyl-β-hydroxy esters"*, *Eur. J. Org. Chem.* **2023**, *26*, e202300421.

P30. L. Rapisarda, **A. Fermi***, P. Ceroni, R. Giovanelli, G. Bertuzzi, M. Bandini, *"Electrochemical C(sp3)–H functionalization of ethers via hydrogen-atom transfer by means of cathodic reduction"*,

Chem. Commun. **2023**, *59*, 2664.

P29. E. Pinosa, E. Bassan, S. Cetin, M. Villa, S. Potenti, F. Calogero, A. Gualandi, **A. Fermi***, P. Ceroni, P. G. Cozzi, *"Light induced access to carbazole-1,3-carbonitrile: towards an efficient thermally activated delayed fluorescent (TADF) photocatalyst for Cobalt mediated allylations"*, *J. Org. Chem.* **2023**, 88, 6390.

P28. M. A. Bryden, F. Millward, T. Matulaitis, D. Chen, M. Villa, **A. Fermi**, S. Cetin, P. Ceroni, E. Zysman-Colman, *"Moving Beyond Cyanoarene Thermally Activated Delayed Fluorescence Compounds as Photocatalysts: An Assessment of the Performance of a Pyrimidyl Sulfone Photocatalyst in Comparison to 4CzIPN"*, *J. Org. Chem.* **2023**, 88, 6364.

P27. S. Rodríguez-Nuévalos, P. Gaviña, A. M. Costero, M. Parra, S. Gil, P. Arroyo, J. A. Sáez, P. Ceroni, **A. Fermi**, *"Colorimetric and fluorescent BODIPY-hydrazone probes for the detection of γ-hydroxybutyric acid (GHB) and cathinones"*, *Dyes Pigm.* **2022**, *207*, 110757.

P26. F. Calogero, G. Magagnano, S. Potenti, A. Gualandi, **A. Fermi***, P. Ceroni, P. G. Cozzi, *"Dual photoredox and nickel catalysed reductive coupling of alkynes and aldehydes"*, *Adv. Synth. Catal.* **2022**, *364*, 3410.

P25. F. Calogero, G. Magagnano, S. Potenti, F. Pasca, **A. Fermi***, A. Gualandi, P. Ceroni, G. Bergamini, P. G. Cozzi, *"Diastereoselective and Enantioselective Photoredox Pinacol Coupling Promoted by Titanium Complexes with a Red-Absorbing Organic Dye"*, *Chem. Sci.* **2022**, *13*, 5973.

P24. M. Villa, P. Ceroni, **A. Fermi***, *"Tetrachromophoric systems based on rigid tetraphenylmethane (TPM) and tetraphenylethylene (TPE) scaffolds"*, *ChemPlusChem* **2022**, *87*, e202100558.

P23. F. Calogero, S. Potenti, E. Bassan, **A. Fermi**, A. Gualandi, J. Monaldi, B. Dereli, B. Maity, L. Cavallo, P. Ceroni, P. G. Cozzi, *"Nickel Mediated Enantioselective Photoredox Allylation of Aldehydes with Visible Light"*, *Angew. Chem. Int. Ed.* **2022**, *61*, e202114981.

P22. G. Morselli, M. Villa, **A. Fermi**, K. Critchley, P. Ceroni, *"Luminescent Copper Indium Sulfide (CIS) Quantum Dots for Bioimaging Applications"*, *Nanoscale Horiz.* **2021**, *6*, 676.

P21. F. Calogero, A. Gualandi, M. Di Matteo, S. Potenti, **A. Fermi**, G. Bergamini, P. G. Cozzi *"Photoredox propargylation of aldehydes catalytic in Titanium"*, *J. Org. Chem.* **2021**, *86*, 7002.

P20. S. Potenti, A. Gualandi, A. Puggioli, **A. Fermi**, G. Bergamini, P. G. Cozzi, *"Photoredox Allylation Reactions Mediated by Bismuth in Aqueous Conditions"*, *Eur. J. Org. Chem.* **2021**, *11*, 1624.

P19. G. Mercuri, M. Moroni, **A. Fermi***, G. Bergamini, S. Galli, G. Giambastiani, A. Rossin, *"Zirconium Metal-Organic Frameworks Containing a Biselenophene Linker: Synthesis, Characterization, and Luminescent Properties"*, *Inorg. Chem.* **2020**, *59*, 15832.

P18. **A. Fermi***, A. Gualandi, G. Bergamini, P. G. Cozzi, *"Shining light on Ti^{IV} complexes: exceptional tools for metallaphotoredox catalysis"*, *Eur. J. Org. Chem.* **2020**, *45*, 6955.

P17. L. Luconi, G. Mercuri, T. Islamoglu, **A. Fermi***, G. Bergamini, G. Giambastiani, A. Rossin, *"Benzothiazolium-functionalized NU-1000: a versatile material for carbon dioxide adsorption and cyanide luminescent sensing"*, *J. Mater. Chem. C* **2020**, *8*, 7492.

P16. A. Gualandi, F. Calogero, M. Mazzarini, S. Guazzi, **A. Fermi**, G. Bergamini, P. G. Cozzi, *"Cp_2TiCl_2-catalyzed photoredox allylation of aldehydes with visible light"*, *ACS Catal.* **2020** *10*, 6, 3857.

P15. **A. Fermi***, D. Bonifazi, *"Tuning the photoredox properties of organic dyes"*, *Royal Society of Chemistry Specialist Periodical Reports in Photochemistry*, volume 47, **2020**, book chapter (eds. A. Albini, S. Protti).

P14. F. Di Maria, M. Zangoli, M. Gazzano, E. Fabiano, D. Gentili, A. Zanelli, **A. Fermi**, G. Bergamini, D. Bonifazi, A. Perinot, M. Caironi, R. Mazzaro, G. Gigli, A. Liscio, G. Barbarella, *"Controlling the Functional Properties of Oligothiophene Crystalline Nano/Microfibers via Tailoring of the Self–*

Assembling Molecular Precursors", *Adv. Funct. Mater.* **2018**, *28*, 1801946.

P13. A. Sciutto, **A. Fermi**, A. Folli, T. Battisti, J. Beames, D. M. Murphy, D. Bonifazi, *"Customizing photoredox properties of PXX-based dyes through energy level rigid shifts of frontier molecular orbitals"*, *Chem. Eur. J.* **2018**, *24*, 4382.

P12. T. Miletić, **A. Fermi**, I. Papadakis, I. Orfanos, N. Karampitsos, A. Avramopoulos, N. Demitri, F. De Leo, S. J. A. Pope, M. G. Papadopoulos, S. Couris, D. Bonifazi, *"A twisted bay-substituted quaterrylene phosphorescing in the NIR spectral region"*, *Helv. Chim. Acta* **2017**, *100*, e1700192.

P11. Y. Yu, G. Fan, **A. Fermi**, R. Mazzaro, V. Morandi, P. Ceroni, D.-M. Smilgies, B. A. Korgel, *"Size-Dependent Photoluminescence Efficiency of Silicon Nanocrystal Quantum Dots"*, *J. Phys. Chem. C* **2017**, *121*, 23240.

P10. J. Dosso, J. Tasseroul, F. Fasano, D. Marinelli, N. Biot, **A. Fermi**, D. Bonifazi, *"Synthesis and Optoelectronic Properties of Hexa-peri-hexabenzoborazinocoronene"*, *Angew. Chem. Int. Ed.* **2017**, *56*, 4483.

P09. T. Miletić, **A. Fermi**, I. Orfanos, A. Avramopoulos, F. De Leo, N. Demitri, G. Bergamini, P. Ceroni, M. G. Papadopoulos, S. Couris, D. Bonifazi, *"Tailoring colors by O annulation of polycyclic aromatic hydrocarbons"*, *Chem. Eur. J.* **2017** *23*, 2363.

P08. A. Kremer, **A. Fermi**, N. Biot, J. Wouters, D. Bonifazi, *"Supramolecular Wiring of Benzo-1,3-chalcogenazoles through Programmed Chalcogen Bonding Interactions"*, *Chem. Eur. J.* **2016**, *22*, 5665.

P07. **A. Fermi**, M. Locritani, G. Di Carlo, M. Pizzotti, S. Caramori, Y. Yu, B. A. Korgel, G. Bergamini, P. Ceroni, *"Light-harvesting antennae based on photoactive silicon nanocrystals functionalized with porphyrin chromophores"*, *Faraday Discuss.* **2015**, *185*, 481.

P06. G. Bergamini, **A. Fermi**, M. Marchini, M. Locritani, A. Credi, M. Venturi, F. Negri, P. Ceroni, M. Baroncini, *"A Highly Luminescent Tetramer from a Weakly Emitting Monomer: Acid- and Redox-Controlled Multiple Complexation by Cucurbit[7]uril"*, *Chem. Eur. J.* **2014**, *20*, 7054.

P05. **A. Fermi**, G. Bergamini, R. Peresutti, E. Marchi, M. Roy, P. Ceroni, M. Gingras, *"Molecular asterisks with a persulfurated benzene core are among the strongest organic phosphorescent emitters in the solid state"*, *Dyes Pigm.* **2014**, *110*, 113.

P04. **A. Fermi**, P. Ceroni, M. Roy, M. Gingras, G. Bergamini, *"Synthesis, Characterization, and Metal Ion Coordination of a Multichromophoric Highly Luminescent Polysulfurated Pyrene"*, *Chem. Eur. J.* **2014**, *20*, 10661.

P03. **A. Fermi**, G. Bergamini, M. Roy, M. Gingras, P. Ceroni, *"Turn-on Phosphorescence by Metal Coordination to a Multivalent Terpyridine Ligand: A New Paradigm for Luminescent Sensors"*, *J. Am. Chem. Soc.* **2014**, *136*, 6395.

P02. G. Bergamini, **A. Fermi**, C. Botta, U. Giovanella, S. Di Motta, F. Negri, R. Peresutti, M. Gingras, P. Ceroni, *"A persulfurated benzene molecule exhibits outstanding phosphorescence in rigid environments: from computational study to organic nanocrystals and OLED applications"*, *J. Mater. Chem. C* **2013**, *1*, 2717.

P01. G. Bergamini, J. K. Molloy, **A. Fermi**, P. Ceroni, F. G. Klärner, U. Hahn, *"Diazapyrenium cored dendrimers: electron poor guests for a molecular clip host"*, *New J. Chem.* **2012**, *36*, 354.

PARTICIPATION TO CONFERENCES, SEMINARS AND WORKSHOPS

CS35. *"Lithium-azaaromatics complexes as powerful visible-light activated photoreductants"*
A. Fermi – Oral presentation – 45th International Conference on Coordination Chemistry, 28 July–2

August 2024, Colorado State University, Ft. Collins (CO), USA.

CS34. *"Unravelling the luminescence properties of persulfurated benzenes"*
A. Fermi – Oral presentation – XXIX PhotoIUPAC, 14–20 July 2024, Valencia, Spain.

CS33. *"Targetting Ar-X bonds with powerful visible light-activated photoreductants"*
A. Fermi – Oral presentation – Interdepartmental Center for Chemical Catalysis (C^3) Meeting, 4 June 2024, Bologna, Italy.

CS32. *"Organic dyes in metallaphotoredox catalysis: a big picture"*
A. Fermi – Oral presentation – Summer School on "Process intensification by flow chemistry", 8–10 May 2024, Lisbon, Portugal.

CS31. *"Shedding light on persulfurated benzenes: how to tune their luminescence properties"*
A. Fermi – Poster presentation – XLIX Congresso Nazionale di Chimica Inorganica (Società Chimica Italiana), 12–15 September 2023, Perugia, Italy (awarded as *Best poster*).

CS30. *"Excited state processes and properties in photoredox catalysis"*
A. Fermi – Oral presentation – Winter School on Photosynthesis and Photocatalysis, 14–16 February 2023, Sofia, Bulgaria.

CS29. *"Insights into the luminescence properties of persulfurated benzenes"*
A. Fermi – Oral presentation – Italian Photochemistry Meeting, 15–17 December 2022, Ferrara, Italy.

CS28. *"Earth-abundant metal complexes in metallaphotoredox catalysis enabled by visible light"*
A. Fermi – Oral presentation – XLVIII Congresso Nazionale di Chimica Inorganica (Società Chimica Italiana), 6–9 September 2022, Pisa, Italy.

CS27. *"Organic dyes in metallaphotoredox catalysis: strategies and perspectives for C-C bond formation enabled by visible light"*
A. Fermi – Oral presentation – 8th EuChemS Chemistry Congress, 28 August–1 September 2022, Lisbon, Portugal.

CS26. *"Enabling metallaphotoredox catalysis with visible light"*
A. Fermi – Oral presentation – XXVIII PhotoIUPAC, 17–22 July 2022, Amsterdam, Netherlands.

CS25. *"Strategies for C-C bond formation in metallaphotoredox catalysis enabled by visible light"*
A. Fermi – Poster presentation – XXXVIII Reunión Bienal Real Sociedad Española de Química, 27–30 June 2022, Granada, Spain.

CS24. *"Enabling metallaphotoredox catalysis with visible light"*
A. Fermi – Oral presentation – Interdepartmental Center for Chemical Catalysis (C^3) Meeting, 31 May 2022, Bologna, Italy.

CS23. *"Cromofori organici per la catalisi fotoredox"*
A. Fermi – Oral presentation – Ciam-In-Talk, 21 December 2021, Department of Chemistry, University of Bologna, Italy.

CS22. *"Isophthalonitrile derivatives as TADF-active chromophores for metallaphotoredox catalysis"*
A. Fermi – Oral presentation – Italian Photochemistry Meeting, 16–18 December 2021, Turin, Italy.

CS21. *"Towards synthetic cathinones detection through hydrazone-BODIPY derivatives"*
S. Rodríguez-Nuévalos, A. M. Costero, M. Parra, P. Ceroni, **A. Fermi** – contributed poster presentation – XVII Simposio de Investigadores Jóvenes de la RSEQ, 23-26 November 2021, Alcalá de Henares, Spain.

CS20. *"Enabling visible-light metallaphotoredox catalysis with isophthalonitrile derivatives: new routes for C–C bond formation"*
A. Fermi – Oral presentation – GIF2, Giornate Italiane di Fotochimica (GIF) del Gruppo Italiano

di Fotochimica (GIF), 23-24 September 2021 — *on-line conference*.

CS19. *"Visible-light activated metallaphotoredox catalysis enabled by TiIV complexes: new routes for C-C bond formation"*
A. Fermi – Oral presentation – XXVII Congresso Nazionale della Società Chimica Italiana, 14–23 September 2021 — *on-line conference*.

CS18. *"Metallaphotoredox catalysis enabled by visible-light absorbing isophthalonitrile derivatives"*
A. Fermi, A. Gualandi, F. Calogero, S. Potenti, S. Guazzi, A. Puggioli, M. Di Matteo, M. Mazzarini, G. Bergamini, P. G. Cozzi – Poster presentation – International Conference on Photochemistry 2021, Geneva, Switzerland, 19–23 July 2021 — *on-line conference*.

CS17. Workshop on Academic Writing and Publishing, Enago Academy, University of Bologna, 13 February 2020.

CS16. 2nd NanoScientific Forum Europe on Scanning Probe Microscopy (Park Systems), University of Bologna, 11–13 September 2019. Hands-on sessions on Kelvin Probe Force Microscopy.

CS15. *"Heteroatom-containing aromatic compounds: a journey through luminescent molecules"*
A. Fermi – Invited oral presentation – Department of Chemistry, University of Trieste, 5 December 2017.

CS14. *"Tuning optoelectronic properties of heteroatom-doped aromatic hydrocarbons"*
A. Fermi – Invited oral presentation – Coffee Talk@ISOF-CNR, 4 July 2017, Bologna, Italy.

CS13. *"Photoinduced electron transfer in organic chemistry"*
A. Fermi – Oral presentation – Organic Section Seminars, School of Chemistry, 8 february 2017, Cardiff, UK.

CS12. *"Extended O-doped polycyclic aromatics: tuning the gaps"*
A. Fermi, T. Miletić, A. Sciutto, D. Bonifazi – Poster presentation – Southampton Supramolecular Chemistry Symposium 2016, 24 June 2016, Southampton, UK.

CS11. *"Asymmetrical N-substituted naphthalene diimides as building blocks in multichromophoric systems"*
A. Fermi, A. Berezin, D. Bonifazi – Oral presentation – 1st International Caparica Christmas Congress on Translational Chemistry, 7–10 December 2015, Caparica, Portugal.

CS10. *"Sulfur-Rich Polyaromatic Architectures: Asterisks, Dendrimers, Polymers, Helicenes and Their Metal Interactions"*
A. Fermi, G. Bergamini, M. Roy, P. Ceroni, M. Gingras – Contributed talk – GECOM-CONCORD 2015, 26–29 May 2015, S.te-Foy-Lès-Lyon, France.

CS09. *"Silicon nanocrystals coated by porphyrins as light-harvesting antennae"*
P. Ceroni, M. Locritani, **A. Fermi**, G. Bergamini, Y. Yu, B. Korgel – Contributed talk – 227th ECS Meeting, 24–28 May 2015, Chicago, USA.

CS08. 1st AFMeeting 2015 (Bruker), Milan, Italy, 24–25 February 2015. Overview on several AFM techniques for application in biological systems and nanomaterials.

CS07. *"Polysulfurated aromatic molecules as ligands in multichromophoric supramolecular networks"*
A. Fermi – Oral presentation – XLI Congresso Nazionale Chimica Inorganica, 5 September 2013, Parma, Italy.

CS06. *"Switching dendrimer luminescence by metal ion coordination"*
P. Ceroni, E. Marchi, **A. Fermi**, M. Baroncini, G. Bergamini – Contributed talk – International Conference on Photochemistry ICP2013, 21–25 July 2013, Leuven, Belgium.

CS05. *"A Persulfurated Benzene Molecule with Bright Phosphorescence in Rigid Environments: Photophysics, Computational Investigation and OLED applications"*

S. Di Motta, F. Negri, G. Bergamini, C. Botta, U. Giovanella, **A. Fermi**, R. Peresutti, M. Gingras, P. Ceroni – Contributed poster presentation – 11th International Symposium on Functional p-Electron Systems, 2–7 June 2013, Arcachon, France.

CS04. *"Polysulfurated asterisks: a class of highly luminescent solids"*
A. Fermi, P.Ceroni, G. Bergamini, C. Botta, M. Gingras – Poster presentation – XXIV IUPAC Symposium On Photochemistry, 15–20 July 2012, Coimbra, Portugal.

CS03. *"Thiophenylene Dendrimers. Properties and Applications"*
M. Gingras, V. Placide, O. Margeat, E. Levillain, A. Allain, P. Ceroni, V. Balzani, **A. Fermi**, H.-J. Raeder, S. Karthäuser – Contributed talk – 7th International Dendrimer Symposium (IDS7), 26 june–1 july 2011, Gaithersburg, Maryland, USA.

CS02. Participation to the 7th "BCP Journée Scientifique Interface Biologie-Chimie-Physique", CNRS-Marseilles, France, 6 December 2010.

CS01. *"Polysulfurated dendrimers as new optoelectronic materials"*
A. Fermi, P.Ceroni, G. Bergamini, M. Gingras – Poster presentation – XXIII IUPAC Symposium On Photochemistry, 11–16 july 2010, Ferrara, Italy.
