Curriculum Vitae

Jacopo Dosso

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Current Position

RTT (Assistant Professor) – University of Trieste

Start date: 01-01-2025.

Former Positions

RTDa (Associated Researcher) – University of Trieste

Period: 01-01-2022-31-12-2024

Supervisor: Prof. Maurizio Prato

Researcher - University of Trieste

Supervisor: Prof. Maurizio Prato

Start date: 15-10-2020–31-12-2021.

Education

Ph.D. in organic Chemistry - Cardiff University, United Kingdom (October 2016-September 2020).

Project title: “Organic engineering of borazino-doped graphene-like structures for optoelectronic applications.”

Supervisor: Prof. D. Bonifazi**.**

Bsc + Master in pharmaceutical chemistry and technology-Università di Trieste, Italy

Mark: 110/110 “summa cum Laude”. Average exam vote: 98/100

(October 2011-July 2016)

Dissertation: “Synthesis of Bis-Perylene derivatives: A new kind of water-soluble chromophores.”

Supervisors: Prof. T. Da Ros (Università di Trieste), Prof. D. Bonifazi (Cardiff University).

Research interests

My current research interest is centered on **organic chemistry** and the synthesis of **functional polyaromatic systems** with a particular focus on their applications as **chromophores**, **photocatalysts** and components in **polymers** and **nanographenes**.

Teaching Experience

- Holder of the laboratory module of the **"Organic Chemistry with Laboratory"** course **[091SM]** (36 hours, 3 CFU). For the degree course in science and technology for the environment and nature (STAN), department of life sciences, University of Trieste. **2022-2023** and **2023-2024**.
- Holder of a module in the teaching of "**Organic Chemistry I**" - **[003CT] [149FA]** (8 hours, 1 CFU). For the Bachelor degree course in chemistry and master's degree in CTF, department of chemical and pharmaceutical sciences, University of Trieste. **2022-2023** and **2023-2024**.
- Holder of a laboratory module in the "**Nanobiotechnologies**" course **[712SM]** (12 hours, 1 CFU). For the master's degree course in medical and diagnostic biotechnologies, department of life sciences, University of Trieste. **2023-2024**, **2024-2025** and **2025-2026**.
- Holder of the course of "**Advanced Organic Synthesis**" - **[034CM]** (48 hours, 6 CFU). For the master's degree course in chemistry, department of chemical and pharmaceutical sciences, University of Trieste. **2024-2025** and **2025-2026**.
- Holder of the doctoral course "**Modern Synthetic Methods in Organic Chemistry**" **[DR17001]** (8 hours, 1 CFU). For doctoral schools in chemistry and nanotechnology, department of chemical and pharmaceutical sciences, University of Trieste. **2023-2024** (Co-Holder) and **2024-2025** (12 hours).
- Holder of the laboratory part of the course "**Organic Chemistry II with laboratory**" **[SM10]** (48 hours, 4 CFU). For the three-year degree course in chemistry, Department of Chemical and Pharmaceutical Sciences, University of Trieste. A.A. **2025-2026**.
- More than 100 hours of tutoring during the inorganic and organic chemistry laboratories at Cardiff University (2016-2020)
- **Supervisor of bachelor's degree internships** (4 students) for the course of study in chemistry in the role of supervisor and co-supervisor at the Department of Chemical and Pharmaceutical Sciences, University of Trieste.
- **Supervisor of master's theses** (1 Student) for the master's degree course in chemistry at the Department of Chemical and Pharmaceutical Sciences, University of Trieste.

List of publications

List of articles published in peer-reviewed journals.

[+]Corresponding author

Metrics: H index: 10, total citations: 325 (from Scopus)

1. **Dosso**, **J**.; Tasseroul, J.; Fasano, F.; Marinelli, D.; Biot, N.; Fermi, A.; Bonifazi, D. Synthesis and Optoelectronic Properties of Hexa-*peri*-hexabenzoborazinocoronene. *Angew. Chem., Int. Ed.* **2017**, 56, 4483−4487.

2. **Dosso**, **J**., Marinelli, D., Demitri, N., Bonifazi, D., Structural Properties of Highly Doped Borazino Polyphenylenes Obtained through Condensation Reaction, *ACS Omega* **2019**, *4*, 9343–9351.

3. Fresta, E., **Dosso, J**., Cabanillas-González, J., Bonifazi, D., Costa R.D., Origin of the Exclusive Ternary Electroluminescent Behavior of BN-Doped Nanographenes in Efficient Single Component White Light Emitting Electrochemical Cells. *Adv. Func. Mater.* **2020**, 1906830.

4. **Dosso, J**., Battisti, T., Ward B.D., Demitri, N., Hughes, C., Harris K.D.M., Bonifazi D., Boron-nitrogen-doped nanographenes: a synthetic tale from borazine precursors *Chem. Eur. J.* **2020**, *26*, 6608-6621.

5. Tasseroul, J., Lorenzo-Garcia, M., **Dosso**, **J**., Simon, F., Velari, S., De Vita, A., Tecilla, P., Bonifazi, D., Probing peripheral H-bonding functionalities in BN-doped polycyclic aromatic hydrocarbons*. J. Org. Chem.* **2020**, *85*, 3454-3464*.*

6. Fresta, E., **Dosso, J**., Bonifazi, D., Costa R.D., Revealing the impact of heat generation using nanographene based light-emitting electrochemical cells. *ACS Appl. Mater. Interfaces,* **2020**, *12*, 28426-28434.

7. Fasano F., **Dosso J**., Bezzu C. G., Carta M., Kerff F., Demitri N., Aprile C., Su B-L., Bonifazi D. Molecular engineering of metal organic frameworks architectures from 2D to 3D BN-doped porous materials. *Chem. Eur. J.* **2021**, *27*, 4124-4133.

8. Bartolomei B., **Dosso J[+]·**, Prato M., New trends in non-conventional carbon dot synthesis. *Trends Chem.* **2021**, *3*, 943–953.

9. **Dosso J[+]·**, Bartolomei B., Demitri N., Cossìo F.P., Prato M., Phenanthrene-Extended Phenazine Dication: An Electrochromic Conformational Switch Presenting Dual Reactivity. *J. Am. Chem. Soc*. **2022**, *144*, 7295-7301.

10. **Dosso, J**., Oubaha, H., Fasano F., Sorin M., Gohy J.F., Hughes, C.E., Harris, K.D.M., Demitri, N., Abrami, M., Grassi, M., Bonifazi D., Boron-Nitride Doped Polyphenylenic Organogels. *Chem. Mater.* **2022**, *34*, 10670-10680.

11. **Dosso, J.⁺** Prato, M. N,N-Diphenyl Dihydrophenazines: Using π-Extension to Access Dicationic Multifunctional Materials, *Chem. Eur. J.*, **2023**, *29*, e202203637.

12. Mamone, M., Gentile, G., **Dosso, J**., Prato, M., Filippini, G. Direct C2–H alkylation of indoles driven by the photochemical activity of halogen-bonded complexes, *Beilstein J. Org. Chem.*, **2023**, *19*, 575-581.

13. Corti, V., **Dosso, J.**, Prato, M., Filippini, G., Photoinduced Cascade Reactions of 2-Allylphenol Derivatives toward the Production of 2,3-Dihydrobenzofurans, *J. Org. Chem*. **2023**, *88*, 6008-6016.

14. Filippini, G., **Dosso, J**.⁺, Prato, M., Phenols as Novel Photocatalytic Platforms for Organic Synthesis, *Helv. Chem. Acta,* **2023**, *106*, e202300059.

15. Gentile G., Bartolomei B., **Dosso J**⁺., Demitri N., Filippini G., Prato M. Synthesis of a Novel Tetra-Phenol π-Extended Phenazine and its Application as Organo-Photocatalyst. *Chem. Commun.* **2024**, *60*, 602-605.

16. Wakchaure V. C., **Dosso J**., Crosta M. Kählig H., Ward D. W., Bonifazi D. Expression of hyperconjugative stereoelectronic interactions in borazines, *Chem. Commun* **2024**, 61, 1200–1203.

17. Kumar R., Taddei M., Petropoulos V., Russo M., Vernuccio F., Cerullo G., Polli D., Nenov A., Demitri N., Prato M., Maiuri M., and **Dosso J.⁺**, Controlling optoelectronic properties through protonation with π-extended triphenodioxazine diimides, *J. Mater. Chem. C.*, **2024**, 13, 2681–2688.

18. Prato M., **Dosso J.***, N-Monoarylated dihydrophenazines in reduced and oxidized states as efficient organo-photocatalysts, *Chem. Commun.* **2025**, 61, 2584-2587.

19. Bezzu, C., Bartolomei B., Wu Y., Vaccaro M., Longo M., De Santo M. P., Fuoco A., Prato M., Carta M., **Dosso J.⁺,** π-Extended dihydrophenazine based redox responsive polymers of intrinsic microporosity, *J. Mater. Chem. A,* **2025***,* **13**, 21683 – 21691.

Funding

- Fondo per la ricerca di Ateneo (FRA 2022-2023-2024-2025)
- **microgrants2024** from FVG region (FENMAT project)
- **Starting grant** università di Trieste

National and international conferences

Invited oral contributions:

Regional:

- I giovani e la chimica in Friuli-Venezia Giulia, with presentation entitled “Using aromaticity to control geometry” Trieste, September 2021.
- la chimica per la transizione ecologica, Trieste October 2022.

International:

- **Cardiff chemistry conference** with presentation entitled “Engineering of Boron-Nitrogen doped polycyclic aromatic hydrocarbons“ 14 May 2019.
- New Horizons in Physical Organic Chemistry and Functional Molecular Materials, **E-WISPOC 24 Satellite Workshop** with presentation entitled: “Accessing multifunctionality with π-extension in dihydrophenazine based systems” Bressanone 9 February 2024.
- **Nanoscience and Nanotechnology Conference** at INFN-Laboratori Nazionali di Frascati with presentation entitled “Construction of redox responsive polymers based on π-extended dihydrophenazine scaffolds”. Frascati 4 June 2024. (https://agenda.infn.it/event/38963/)
- **Euchems 2024**, workshop “Molecular electronics for supramolecular photosynthesis: showcasing the inter-European Chemical Society Scientific Legacy” with presentation entitled “Teaching an old dog new tricks: designing phenazine scaffolds for novel applications” Dublino 11 July 2024. (https://virtual.oxfordabstracts.com/#/event/4853/session/108253)
- **Emerging Investigators Symposium** “New Horizons in Functional Molecular Systems” with the presentation entitled: “From photocatalysis to gas separation, a journey in multifunctionality with π-extended dihydrophenazines” Lipari 6 July 2025.

Invited seminars at foreign excellence research centres and universities:

- Invited seminar at the Donostia International Physics Center (DIPC) with the title “Reinventing dihydrophenazine systems: From smart materials to catalysis” San Sebastian/Donostia Spain 12 April 2024.

Other contributions:

- Participation as a speaker at the awards ceremony of the Friuli Venezia Giulia regional phase of the Chemistry Games 2025 with a seminar entitled "Addressing climate change with organic chemistry".

Poster presentations:

- 2nd RSC Macrocyclic and supramolecular chemistry meeting (MASC) early career meeting, Manchester July 2018.
- 12th International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC) July 2017, Cambridge

Awards

- **"Seal of Excellence"** of the Marie Curie MSCA-IF-2020 H2020 with a final score of **90.60/100**.
- **Glib Meleshko award** for the best Ph.D. research lecture (Cardiff Chemistry Conference 2019)

Reviewer Activity

- Chemical communications
- Chemistry select
- Advanced Synthesis & Catalysis
- Chemistry a European Journal
- Chemistry an Asian Journal

Jacopo Dosso,
Trieste,
08/07/2025