PERSONAL INFORMATION

Sara Ferrara

Nationality Italian

Languages: Italian, English (C1), French (B2), Spanish (B1), German (A2)

WORK INFORMATION

- **October 2020 – November 2024 (planned): PhD Cadidate**
  Technical University of Munich
  Chair of Biogenic Functional Materials (Prof. Costa), 94315 Straubing (Germany)

  Preparation and optimization of down-converting materials for Bio-Hybrid White Emitting LEDs with a focus on the stabilization strategies of bio-emitters in polymer matrices (ARTIBLED H2020 Project).

- **February 2020 – September 2020: Research Assistant**
  Imdea Materiales
  Tecnogetafe, Calle Eric Kandel, 2, 28906 Getafe, Madrid, Spain

  Preliminary studies on organic emitters for Hybrid LEDs in the context of ARTIBLED H2020 Project.

EDUCATION

- **2017- 2019: M.Sc. - Industrial Chemistry**
  Università degli Studi di Torino (Italy)
  110L/110
  Master thesis on synthesis and application of novel squaraine dyes as photosensitizers for aqueous Dye Sensitized Solar Cells carried out between University of Turin and in Imdea Materials in Getafe, Madrid – Spain.

- **2013 – 2017: B. Sc. - Chemistry and Chemical Technologies**
  Università degli Studi di Torino (Italy)
  99/110

Track records:

Number of papers: **7** published, **2** submitted; Number of book chapters: **1**; Patents: **3**

Publications

1. **Ferrara, S.**, Grümbel, S., Fuenzalida-Werner, J. P., Costa, R. D., Bacterial Hybrid Light-Emitting Diodes, *Adv. Mater.*, Upon second revision, **2024**.
2. **Ferrara, S.**, Gutiérrez-Armayor, D., Nieddu, M., Zieleniewska, A., Costa, R. D., Impact of Fluorescent Protein PEGylation Stabilization for Photon Manipulation on Deep-Red Light-emitting Devices, *Adv. Funct. Mater.*, Submitted, **2024**.
3. Grümbel, S., Hasler, M., **Ferrara, S.**, Marta Patrian, Jesús Agustín Banda-Vázquez, Pedro B. Coto, Juan Pablo Fuenzalida Werner, Rubén D. Costa, Simple encoded Circularly Polarized Protein Lighting, *Adv. Opt. Mater.*, **2024**.
4. Cavinato, L. M., Kost, V., Campos Jara, S., **Ferrara, S.**, Chowdhury, S., Groot, I. M. N., Da Ros, T., Costa, R. D., Blue-emitting Boron- and Nitrogen-Doped Carbon Dots for White Light-emitting Electrochemical Cells, *Adv. Opt.*

Mater., **2024**.

5. **Ferrara, S.**, Femández-Blázquez, J. P., Fuenzalida-Werner, J. P., Costa, R. D., Homopolymeric Protein Phosphors: Overpassing the Stability Frontier of Deep-red Bio-hybrid Light-emitting Diodes, *Adv. Funct. Mater.*, **2023**.
6. **Ferrara, S.**, Costa, R. D., Nanosized Phosphors for White Light-emitting diodes, *Sustainable Nanomaterials for Energy Applications*, **2023**.
7. Nieddu, M., Patrian, M., **Ferrara, S.**, Fuenzalida-Werner, J.P., Kohler, F., Dietz, H., Costa, R.D., Core-shell-structured Fluorescent Protein Nanoparticles: New Paradigm Towards Zero-thermal-quenching in High Power Bio-hybrid Light-emitting Diodes, *Adv.* Sci., **2023**.
8. Hasler, M., Patrian, M., Banda-Vázquez, J., **Ferrara, S.**, Stiel, A., Fuenzalida-Werner, J.P., Costa, R. D., Fully Biogenic Near-infrared Phosphors: Phycobiliproteins and Cellulose at Force Towards Highly Efficient and Stable Bio-hybrid Light-emitting Diodes, *Adv. Funct. Mat.* **2023.**
9. **Ferrara, S.**, Mejias, S. H., Liutkus, M., Renno, G., Stella, F., Kociolek, I., Fuenzalida-Werner, J. P., Barolo, C., Coto, P. B., Cortajarena, A. L., Costa, R D., Designing Artificial Fluorescent Proteins: Squaraine-LmrR Biophosphors for High Performance Deep-Red Biohybrid Light-Emitting Diodes. *Adv. Funct. Mater.* **2022**.
10. Cavinato, L. M., Fresta, E., **Ferrara, S.**, Costa, R. D., Merging Biology and Photovoltaics: How Nature Helps Sun-Catching. *Adv. Energy Mater.* **2021**.

Patents

- Patent filling in progress, **2024**.
- Patent filling in progress, **2024**.
- Submitted patent, EP24 151 909.9, **2023**.
- Submitted patent, EP24 155 745.3, **2023**.

International Conferences

- **EMRS 2024 – Fall Meeting** (planned, September 2024) – Symposium organization assistant
- **Congresso SCI 2024** (planned, August 2024) - Oral
- **EuChemS 2024** – Oral and poster
- **EMRS 2024 – Spring Meeting** - Oral
- **EMRS 2023 – Fall Meeting**- Oral
- **MRS – Fall Meeting and Exhibit 2022** -Oral
- **EUROMAT 2021** - Keynote
- **EMRS 2021 – Spring Meeting** - Oral
- **Orbitaly 2019** - Poster

Awards

- **European Young Chemist Award,** Silver Medal - EuChemS 2024
- **Young Researcher Award**, EMRS 2024 Spring – *Symposium R: Progress in unconventional electronics and sustainable flexible sensing technologies*
- Young Researcher Award, EMRS 2023 Fall – *Symposium N: Sustainable advanced and multifunctional polymer based materials for sensor and actuators, energy and environmental applications*
- **3 minutes PhD Thesis Competition** – EMRS 2023 Spring

Others trainings

- **Innovation Bootcamp,** April 2023 – European Innovation Council
- Innovation Discovery Training, May 2023– European Innovation Council
- **XPLORE (Start-up validation programme),** April 2024 – Unternehmer TUM

Straubing, 06.08.2024

Signature
Sara Ferrara