

# Gabriele Lingua

## **Personal data:**

**Date of birth:** 03/06/1993

**Nationality:** Italian

**Gender:** Male

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**Address:** POLYMAT, University of the Basque Country UPV/EHU, Joxe Mari Korta Center, Avda Tolosa 72, 20018 Donostia-San Sebastian, Spain.

## **Academic qualifications:**

08/2007 – 06/2012 – Cuneo (CN), Italy

**HIGH SCHOOL DIPLOMA** – Istituto Tecnico Industriale Statale "Mario Delpozzo" (ITIS)

**Address** Corso Alcide de Gasperi, 30, Cuneo (CN), Italy **Field of study** Chemistry

**Final grade** 75/110

08/2012 – 09/2015 – Turin (TO), Italy

**BACHELOR'S DEGREE** – University of Turin, Italy

**Address** Via Giuseppe Verdi, 8, Turin (TO), Italy **Field of study** Materials Science

**Final grade** 105/110 **Thesis** Transfer of graphene (produced by CVD) using cyclododecane

09/2015 – 12/2017 – Turin (TO), Italy

**MASTER'S DEGREE** – University of Turin, Italy

**Address** Via Giuseppe Verdi, 8, Turin (TO), Italy **Field of study** Materials Science

**Final grade** 110/110 with Laude

**Thesis** Synthesis and characterization of model systems for Ziegler-Natta catalyst

03/2017 – 12/2017 – Turin (TO), Italy

**MASTER RESEARCH PROJECT IN THE PHYSICAL CHEMISTRY GROUP AT THE DEPARTMENT OF CHEMISTRY** – University of Turin

During the Master and thesis laboratory experience "Synthesis and characterization of model systems for Ziegler-Natta catalysts" I got experiences with the most common organic and inorganic synthetic methods, especially material preparation under controlled environment (N or Ar flux and exploiting Glove-Box and Dry-Room systems). Knowledge in most common characterization techniques such as in-situ FT-IR in transmission, ATR, diffuse reflectance UV-Vis spectroscopies, powder XRD analysis, thermal analysis (TGA, DSC), optical and Scanning Electron microscopies have been acquired. Especially, ability in characterizing the surface of materials by using FT-IR spectroscopy of adsorbed probe molecule (mainly CO, both at 100 K and room temperature).

**Address** Via Giuseppe Verdi, 8, Turin (TO), Italy **Field of study** Materials Science

01/11/2018 – 28/06/2022 – Torino (TO), Italy

**DOCTOR OF PHILOSOPHY (PHD)** – Polytechnic of Turin

During the PhD research project "Development of innovative solid polymer electrolytes for safe, highenergy storage/conversion devices" I learned the techniques required for the preparation of battery components (electrodes and electrolytes) exploiting inorganic synthesis, solvent casting and UV/thermal induced Free radical polymerization for the production of in-situ/ex-situ polymer electrolyte membranes. Applied knowledge in the field of electrochemical characterization: galvanostatic cycling (GC), cyclic voltammetry (CV), electrochemical impedance spectroscopy (EIS). I spent a huge part of the time in laboratory and I had also the opportunity to work in a multi-cultural and multi-disciplinary research center such as LIST Institute of Luxemburg. This gave me the possibility to get in touch with different research approaches and international professors, PhD students and researchers. This educational path let me to improve my communication skills and to develop the attitude needed to collaborate on common research projects (European R&D&I projects).

**Address** Corso Duca degli Abruzzi 24, Torino, Italy **Field of study** Material Science and Technology

**Final grade** Ph.D. summa cum lauda

**Thesis** Newly designed single-ion conducting polymer electrolytes enabling advanced Li-metal solid-state batteries

06/2019 – 11/2019 – Hautcharage, Luxembourg

**EXCHANGE PHD STUDENT IN THE FRAME OF EU – Luxembourg Institute of Science and Technology (LIST)**

During the research experience at LIST, I improved my knowledge in the field of organic synthesis through the preparation of monomers with defined functionalities, but also polymer chemistry, investigating Ring-Opening, Free radical and controlled RAFT polymerization techniques for the preparation of solid block copolymer electrolytes with specific architecture and single ion conducting functionality.

Indeed, expertise in polymer characterization have been gained. The polymer electrolytes were thoroughly studied by mean Size-exclusion chromatography, DCS, TGA, FT-IR and NMR spectroscopy techniques before electrochemical characterization and application in lab-scale Li metal cell.

**Address** 5 rue Bommel ZAE Robert Steichen, Hautcharage, Luxembourg **Field of study** Organic chemistry/Polymer chemistry

29/06/2022 – 15/10/2022 – Torino (TO), Italy

**POSTDOCTORAL RESEARCHER – Polytechnic of Turin**

Development and characterization of polymer-based electrolytes for energy storage and conversion devices.

**Address** Corso Duca degli Abruzzi 24, Torino, Italy **Field of study** Material Science and Technology devices.

17/10/2022 – 24/01/2024 – Donostia-San Sebastián, Spain

**POSTDOCTORAL RESEARCHER – POLYMAT-University of the Basque Country UPV/EHU**

**Address** Tolosa Avenue, 72, 20018. Donostia-San Sebastián, Spain, Donostia-San Sebastián, Spain The research was mainly focused in the development of innovative solid polymer electrolytes, physical-chemical and electrochemical characterization of electrolytes and electrode materials for application in alkali-based energy storage.

**Address** POLYMAT, University of the Basque Country UPV/EHU, Joxe Mari Korta Center, Avda Tolosa 72, 20018 Donostia-San Sebastian, Spain. **Field of study** Polymer chemistry/electrochemistry

24/01/2022 – current – Donostia-San Sebastián, Spain

**POSTDOCTORAL RESEARCHER - Marie Curie COFUND ADAGIO Postdoctoral fellowship (Horizon Europe) – POLYMAT-University of the Basque Country UPV/EHU**

**Address** Tolosa Avenue, 72, 20018. Donostia-San Sebastián, Spain, Donostia-San Sebastián, Spain The research was mainly focused in the development of innovative solid polymer electrolytes, physical-chemical and electrochemical characterization of electrolytes and electrode materials for application in alkali-based energy storage.

**Address** POLYMAT, University of the Basque Country UPV/EHU, Joxe Mari Korta Center, Avda Tolosa 72, 20018 Donostia-San Sebastian, Spain. **Field of study** Polymer chemistry/electrochemistry

**Languages:**

Italian (native speaker), English (B2), Spanish (B1)

**Digital Skills:**

Microsoft Word, Microsoft Excel, Microsoft Power point, Origin Pro: proficient at scientific data Processing, Mendeley software. Use of software for spectroscopic analysis: FTIR (Bruker, OPUS), NMR (TopSpin e MestReNova), Chemdraw3D, , Use of software for electrochemical analysis: Arbin, Biologic, Neware.

**Awards:**

- Poster award at Giornate dell'Elettrochimica Italiana (GEI 2019)
- Honorable mention for the video presentation at 2<sup>o</sup> Edition INSTM/Polymers award
- 2023 Marie Curie COFUND ADAGIO Postdoctoral fellowship (Horizon Europe)
- 2023 Marie Curie COFUND Energy for future – E4F Postdoctoral fellowship (Horizon Europe) (not accepted)

**List of articles:** Gabriele Lingua on Google scholar/Scopus. ORCID 0000-0002-9878-0185