CURRICULUM VITAE ET STUDIORUM: *Verdiana Checola*



Personal data: Born in Carpi (MO), date 26 07 2002
Present Position: PhD Student
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EDUCATION

- **July 2024** Degree in Chemistry (L-27) at the University of Modena and Reggio Emilia with a thesis entitled 'Ottimizzazione della composizione chimica di elettroliti polimerici per batterie a stato solido', under the supervision of Prof. Andrea Paolella
- **October 2026** Degree in Chemical Sciences (LM-54) at the University of Modena and Reggio Emilia with a thesis entitled 'Sintesi di un nuovo elettrolita per batterie a stato solido a base di litio metallico', under the supervision of Prof. Andrea Paolella

Attended SCHOOL

- **2016-2021** High School Diploma at the Rinaldo Corso State High School of Correggio (RE)

Attended PROJECT

- **05/2025-06/2025** Open Badge "Tecnologie e materiali innovativi per l'efficienza energetica e la sostenibilità ambientale". The training project was carried out by CIS Scuola per la Gestione d'Impresa

MEMBERSHIPS AND APPOINTMENTS

- Member of the Doctorate School 'Models and Methods for Material and Environmental Sciences' of the University of Modena and Reggio Emilia (from the academic years 2026/2027 to in progess)

RESEARCH PROJECTS

- 03/2024 – 05/2024 Research Internship at Novac S.r.l. in collaboration with the University of Modena and Reggio Emilia (UNIMORE). Scientific Tutor: Andrea Paolella. During this internship, I had the opportunity to work on the optimization and performance characterization of a polymer electrolyte for solid-state batteries based on lithium metal and anodeless technology
- 08/2026 – 09/2026 Research Internship at the University of Modena and Reggio Emilia (UNIMORE) in collaboration with Novac S.r.l. Scientific Tutor: Andrea Paolella. During this internship, I had the opportunity to work on the synthesis and performance characterization of a new polymer electrolyte for solid-state batteries based on lithium metal and anodeless technology

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITY

This PhD project focuses on the development of polymer electrolytes are produced in the form of films using a roll-to-roll process, like the method employed for the manufacture of cathodes and anodes, for lithium metal based solid-state batteries. This research incorporates advanced polymeric materials, specifically single-ion conducting polymers, in which an anionic species is covalently bonded to the polymer backbone, while the corresponding cation (typically Li^+) remains free to move. The objective is to enhance ionic conductivity by modifying the anionic unit, using anions with highly delocalized charges, and strategies such as cross-linking, copolymerization, the addition of plasticizers, and the incorporation of fillers are employed to reduce crystallinity and lower the glass transition temperature.

Updated on 04/11/2026