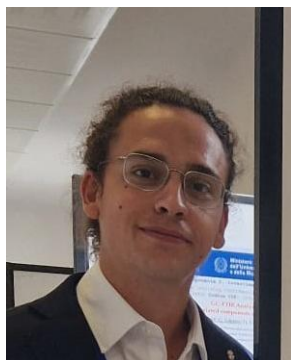


CURRICULUM VITAE ET STUDIORUM: ...*Mirco Rivi*...



Personal data: Born in Sassuolo (MO), date 05/08/2000

Present Position: PhD Student

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EDUCATION

- 10/2024 Master's Degree in Chemistry (summa cum laude) at the University of Modena and Reggio Emilia with a thesis entitled 'Using Primary Indicators for Geographic Traceability of Industrial Hemp', under the supervision of Prof. Andrea Marchetti
- 09/2022 Bachelor's Degree in Chemistry (109/110) at the University of Modena and Reggio Emilia with a thesis entitled 'Characterization of cement based binding materials', under the supervision of Prof. Lorenzo Tassi

Attended SCHOOLS

- 2014-2019 High School Diploma (94/100) at the I.T.I.S. Alessandro Volta

MEMBERSHIPS AND APPOINTMENTS

- Member of the Division of analytical chemistry of the Italian Chemical Society.
- Member of the National Interuniversity Consortium for Materials Science and Technology (INSTM)
- 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 2025/2026 to in progress)

RESEARCH PROJECTS

- 12/2024 – 10/2025 Research Fellow at the University of Modena and Reggio Emilia (UNIMORE) in collaboration with Italia Zuccheri – Coprob S.c.a. (Via Mora 56, 40061 Minerbio, BO, Italy) Scientific Tutor: Andrea Marchetti.
Project focused on the optimization of the sugar extraction process from sugar beet, followed by the characterization of both the extract and the obtained sugar using analytical techniques such as: CHNS, ICP-MS, HR-MC-ICP/MS, FAAS, GC-MS, and HPLC-MS.
- 02/2024 – 10/2024 Research Internship at the University of Modena and Reggio Emilia (UNIMORE) Scientific Tutor: Andrea Marchetti.
During this internship, I had the opportunity to work on the chemical traceability of textile hemp, developing a process for the determination of elemental composition and isotopic ratios of heavy metals using analytical techniques such as: CHNS analysis, ICP-MS, HR-MC-ICP/MS, GFAAS, and FAAS.
- 04/2022 – 08/2022 Research Internship at the University of Modena and Reggio Emilia (UNIMORE) in collaboration with Litokol S.p.A. Scientific Tutor: Lorenzo Tassi
During this internship, I worked on cement-based binder samples provided by an industrial partner, which were characterized through a reverse engineering process.

POSTER PRESENTATIONS

- Use of primary indicators such as elemental composition and strontium isotope ratio ($^{87}\text{Sr}/^{86}\text{Sr}$) in industrial hemp for geographic traceability purposes, Mirco Rivi, Veronica D'eusanio, Andrea Marchetti, Emilio Bonfiglioli, Lorenzo Tassi. Italian Chemical Society XXXI National Congress of the Analytical Division 7-11 September 2025, Pisa

AWARDS

- 'Best Master's Thesis Award' Prize released by Analytical Chemistry Division of the Italian Chemical Society (SCI).
work on chemical traceability of textile hemp, developing a process for the determination of elemental composition and isotopic ratios of heavy metals using analytical techniques such as: CHNS analysis, ICP-MS, HR-MC-ICP/MS, GFAAS, and FAAS. 19/05/2025

TEACHING ASSISTANCE

- Tutorship for the course: *Analytical Chemistry and laboratory* at the bachelor of science in Green and Sustainable Chemistry, University of Modena and Reggio Emilia (from the academic years 2025/2026 to in progress)

BRIEF DESCRIPTION OF THE RESEARCH ACTIVITY

This PhD project focuses on developing a multiparametric analytical model for the traceability and authenticity verification of agri-food products, specifically targeting the Gorgonzola PDO dairy supply chain. The research integrates advanced untargeted (e.g., NMR, LC/MS) and targeted (e.g., IRMS, ICP-MS) techniques to gather complementary data, including isotopic ratios ($\delta^{13}\text{C}$, $^{87}\text{Sr}/^{86}\text{Sr}$) and comprehensive chemical profiles. The objective is to identify robust markers (direct and indirect indicators) of geographic origin and production integrity. Finally, chemometric tools (PCA, PLS) will be used to integrate this complex dataset into an objective traceability model, ultimately strengthening consumer confidence and protecting the value of PDO products.

OTHER INFORMATION

Conference and seminars:

- 18-19 June 2025, Training school on the applications of microwave technology in the modern analytical laboratory. University of Modena and Reggio Emilia, Department of Chemical and Geological Sciences.
- 15-16 July 2025, Waste Energy Water Nexus: Materials & Processes (WEW), Marina di Ravenna
- 7-11 September 2025, Italian Chemical Society XXXI National Congress of the Analytical Division, Pisa
- 31/10 – 02/11 2025, WEFOOD ACADEMY Discovering the Factories of Taste (Academy Project).

LIST OF SCIENTIFIC PUBLICATIONS ON INTERNATIONAL JOURNALS WITH IF.

1. D'Eusanio, V.; Marchetti, A.; Rivi, M.; Morelli, L.; Scarponi, P.; Forti, L.; Tassi, L. Mineral Composition Analysis of Red Horse-Chestnut (*Aesculus × Carnea*) Seeds and Hydroalcoholic Crude Extract Using ICP OES. *Molecules* 2025, 30, 819. <https://doi.org/10.3390/molecules30040819>
2. D'Eusanio, V.; Frignani, E.; Marchetti, A.; Pigani, L.; Rivi, M.; Roncaglia, F. Long-Term Variability in the Content of Some Metals and Metalloids in *Aesculus* Flowers: A Four-Year Study Using ICP OES and PCA Analysis. *Molecules* 2025, 30, 908. <https://doi.org/10.3390/molecules30040908>.
3. D'Eusanio, V.; Rivi, M.; Malferrari, D.; Marchetti, A. Optimizing Hempcrete Properties Through Thermal Treatment of Hemp Hurds for Enhanced Sustainability in Green Building. *Sustainability* 2024, 16, 10404. <https://doi.org/10.3390/su162310404>.
4. Andrea Severini, Biagio Anderlini, Antonio Lezza, Marianna Burello, Nicola Porcelli, Marco Mazzali, Veronica D'Eusanio, Mirco Rivi, Claudio Fontanesi and Fabrizio Roncaglia. Industrial and engineering chemistry research: Continuous-Flow Glycerolysis of Urea to Glycerol Carbonate: The Critical Role of Operating Pressure *Ind. Eng. Chem. Res.* 2025, 64, 38, 18630– 18639 <https://doi.org/10.1021/acs.iecr.5c02554> ...

Updated on 15/11/2025