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## Electron paramagnetic resonance approaches to study biologically relevant reactions: examples from amyloid aggregation to enzymes

Passerini, L.

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## Curriculum Vitae

Leonardo Passerini

**Leonardo Passerini** was born on May 17th, 1994, in Trento, Italy.

He obtained a BSc in Biology (2017) and an MSc in Industrial Biotechnology (2019) from the University of Padua. His Master's thesis was titled *"Biochemical and Spectroscopic Approach for the Study of Iron Binding to Frataxin."*

In 2020, he held a research grant at the Department of Chemistry, University of Padua.

From 2021 to 2025, he carried out his PhD in Physics in the MONOS group at Leiden University. His PhD thesis was titled *"Electron Paramagnetic Resonance Approaches to Study Biologically Relevant Reactions: Examples from Amyloid Aggregation to Enzymes."*

In 2025, he joined the Laboratory of Molecular Magnetism at the University of Florence as a postdoctoral researcher.



## List of Publications

- [1] D. Doni, **L. Passerini**, G. Audran, S.R.A. Marque, M. Schulz, J. Santos, P. Costantini, M. Bortolus, D. Carbonera, Effects of Fe<sup>2+</sup>/Fe<sup>3+</sup> Binding to Human Frataxin and Its D122Y Variant, as Revealed by Site-Directed Spin Labeling (SDSL) EPR Complemented by Fluorescence and Circular Dichroism Spectroscopies, *International Journal of Molecular Sciences*, 2020, 21, 9619. <https://doi.org/10.3390/ijms21249619>.
- [2] D. Doni, G. Rigoni, E. Palumbo, E. Baschiera, R. Peruzzo, E. De Rosa, F. Caicci, **L. Passerini**, D. Bettio, A. Russo, I. Szabò, M.E. Soriano, L. Salviati, P. Costantini, The displacement of frataxin from the mitochondrial cristae correlates with abnormal respiratory supercomplexes formation and bioenergetic defects in cells of Friedreich ataxia patients, *The FASEB Journal* 35(3) (2021) e21362.
- [3] D.M. Klein, **L. Passerini**, M. Huber, S. Bonnet, A Stable Alkylated Cobalt Catalyst for Photocatalytic H<sub>2</sub> Generation in Liposomes, *ChemCatChem* 14(20) (2022) e202200484.
- [4] E. Zurlo, **L. Passerini**, P. Kumar, M. Huber, In Situ Continuous Wave Electron Paramagnetic Resonance Investigation of the Amyloid Aggregation of Parkinson's Protein Alpha-Synuclein—the Second Spin-Label Position, *Applied Magnetic Resonance* 53(7) (2022) 1133-1150.
- [5] E.O. Bobylev, **L. Passerini**, F.J. de Zwart, D.A. Poole, S. Mathew, M. Huber, B. de Bruin, J.N.H. Reek, Pd<sub>12</sub>MnL<sub>24</sub> (for n = 6, 8, 12) nanospheres by post-assembly modification of Pd<sub>12</sub>L<sub>24</sub> spheres, *Chemical Science* 14 (2023) 11840-11849.
- [6] E.A. Polanco, L.V. Opdam, **L. Passerini**, M. Huber, S. Bonnet, A. Pandit, An artificial metalloenzyme that can oxidize water photocatalytically: design, synthesis, and characterization, *Chemical Science* 15(10) (2024) 3596-3609.
- [7] M. Saberi, R. Dekkers, **L. Passerini**, M. Huber, M. Overhand, M. Ubbink, Terminal spin labeling of xylotriase strongly affects interactions in the active site of xylanase BcX, *Journal of Biomolecular NMR* 79(2) (2025) 99-113.

