



Lucas Castro

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Paris - FR

Skills

- Analytical Method Development & Validation
- Mass Spectrometry & Chromatography
- Electrochemical Analysis & Sensor Development
- Microfabrication & Prototyping (3D Printing, Screen-Printed Devices)
- Data Analysis & Interpretation
- Scientific Reporting & Technical Communication

Awards

- 18th CNPq National Award (Brazil)
- SBPC (Brazil)
- Consuni UFG (Brazil)
- PSL PhD Track (France)
- Tony B. Award 2022 and 2025 (USA)

Languages

- Portuguese (C2)
- English (C1)
- French (C1)

Summary

R&D scientist with 8+ years of experience bridging analytical chemistry, electrochemistry, and applied life sciences. Strong expertise in translating advanced analytical methodologies into practical, innovation-driven solutions. Proven ability to deliver high-impact scientific results aligned with product development objectives.

Education

- Jan. 2017 – Jun. 2021** B.Sc. in Chemistry at Federal University of Goiás in Brazil
- Aug. 2021 – Jul. 2023** M.Sc. in Chemistry and Life Science at Paris Science et Lettres (PSL)
- Oct. 2023 – Sept. 2026** Ph.D. in Chemistry at PSL (collaboration with the UNAM-Mexico and TUM-Germany)

Publications and Patents

Author of 8 peer-reviewed publications in high-impact journals (Analytical Chemistry, Trends in Analytical Chemistry, Talanta, Lab on a Chip, Analytical and Bioanalytical Chemistry, Scientific Reports).

Co-inventor of 1 patented technology.

Experiences

- Nov. 2017 – Jun. 2020 Internship** at Microfluidic and Electrophoresis Group

Project 1 – Wearable device for diabetes and periodontitis diagnostics

Project 2 – Electrochemical device for viral detection

- Jan. – Mar. 2020 Internship** at Brazilian Synchrotron Light Laboratory

Designed and developed a microfluidic electrochemical platform compatible with synchrotron-based analytical techniques

- Jun. – Sept. 2020 Industrial internship** at Cifarma Pharmaceutical

Participated in analytical method validation in accordance with regulatory guidelines

Contributed to quality control processes and documentation

- Feb. – Jul. 2021 Internship** at Brazilian Nanotechnology National Laboratory

Developed a rolled-up microelectrochemical sensing platform for non-invasive biomarker detection in sweat

- Jan. – Jul. 2022 Master Internship** at Chimie ParisTech

Designed and developed an electrochemical platform for controlled protein digestion

- Feb. – Jul. 2023 Master Internship** at L'Oréal

Contributed to the validation of an electrochemical device intended for cosmetic application testing

Supported alternative testing strategies aligned with non-animal testing regulations

- Aug. 2023 – Sept. 2026 Ph.D.** ESPCI and Chimie ParisTech

Designed and developed a microfluidic electrochemical platform for cell lysis and proteolysis

Conducted proteomics and genomics studies to investigate biomolecular responses following electrochemical processing.