

Cheikh Reda Bernaoui

Research Chemist|Specialist in Environmental Chemistry, Nanomaterials, and Energy Storage

Professional Profile

Ph.D. Research Chemist with expertise in environmental chemistry, solar energy materials, and advanced battery technologies. Brings 7+ years of industrial experience in petroleum refining. Demonstrates strong interdisciplinary collaboration, adaptability in global research settings, and a proven track record of innovative problem-solving.

Education

• Ph.D. in Chemistry

University of USTO-MB Oran, Algeria (2023)

Thesis: Synthesis of Magnetic Nanoparticles for Water Treatment

• Erasmus+ Research Fellow (Ph.D. Program)

University of Cádiz, Spain (2022)

Focus: Materials for Solar Energy Conversion

• Master's degree in chemistry

University of USTO-MB Oran, Algeria (2017)

Thesis: Soil Contamination by Hydrocarbons and Valorization of Waste Sludge from Refineries

• Diploma of Higher Technician in Refining and Petrochemicals

Algerian Petroleum Institute (IAP) (2015)

Professional Experience

• Junior Postdoctoral Researcher

Sapienza University of Rome, Italy (2024-Present)

◦ Research focus: Lithium-metal battery technologies

◦ Collaboration within multidisciplinary energy storage projects

• Senior Exploitation Technician

Refinery of Algeria (Sonatrach) (2015-2022)

◦ Specialized in oils, analytical testing, and process optimization in refining and petrochemical products

◦ Contributed to security compliance and technical operations

• Experimental Researcher

Synchrotron SOLEIL, SMIS Beamline, Paris, France (2025)

Project:Crystallization and Argon Effusion in Amorphous Nanoparticl
e Coatings for Gravitational Wave Detection

Publications & Conferences

- Authored peer-reviewed paper on environmental materials
- Participant in national and international scientific conferences and seminars **Technical Skills**

- Synthesis and characterization of nanoparticles
- Battery assembly and electrochemical testing (coin cells, L-cells) also cyclers.
- Laboratory instrumentation (FTIR, SEM/EDS, UV-Vis, XRD, XRF)
- Familiarity with cleanroom protocols and synchrotron techniques
- Team-based R&D collaboration and project documentation

Languages

- **Arabic** (Native)
- French, English (Fluent)
- Spanish, Italian (Intermediate/Conversational)

Soft Skills

- Strong problem-solving and analytical thinking
- Effective communication and teamwork across cultures
- Adaptability to new lab environments and instrumentation
- Ethics-driven, detail-oriented, and committed to scientific integrity