



José Miguel Silva Ferraz

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📍 **Home:** Vila Nova de Gaia (Portugal)

EDUCATION AND TRAINING

PhD in Electrical, Materials, Raw Materials and Nanotechnology Engineering - Chemical Sciences *La Sapienza University of Rome* [2023 – Current]

City: Roma

Country: Italy

Field(s) of study: Chemical Sciences

Thesis: Design, Synthesis and Characterization of New Organic Semiconductors

Master's Degree in Chemistry with a Specialization in Functional Surfaces and Materials for Sustainability

Faculty of Sciences of the University of Porto [09/2021 – 09/2023]

City: Porto

Country: Portugal

Field(s) of study: Chemistry with a Specialization in Functional Materials and Surfaces for Sustainability | .

Final grade: 16/20

Thesis: Thermophysical Study of Phenanthroline Derivatives: A Contribution for the Development of New Charge Transport Materials

Bachelor's Degree in Chemistry

Faculty of Sciences of the University of Porto [09/2018 – 07/2021]

City: Porto

Country: Portugal

Field(s) of study: Chemistry

Final grade: 15/20

Type of credits: ECTS – Number of credits: 180

Thesis: Dispersion of nanomaterials by simultaneous ultrasonic and electric excitation

General and Fundamental Chemistry with a specialization in inorganic/ materials/ nano chemistry. It is important to note that during the degree a vast set of laboratory skills were developed.

During the last semester developed a thesis on the design, construction and exploratory testing of a double excitation dispersion device. The final grade of the thesis was 19/20.

Traineeship

La Sapienza University of Rome [28/01/2023 – 31/03/2023]

City: Rome

Country: Italy

Field(s) of study: Chemistry / Materials Chemistry

Thermal Analysis; Vapour Pressure Studies; Thermophysical Characterization

Traineeship

Faculty of Sciences of the University of Porto [01/02/2022 – 31/07/2022]

City: Porto

Country: Portugal

Field(s) of study: Chemistry

"Physico-chemical characterization of compounds with a potential application as "SMART materials" ". Purity Control; Thermal Analysis; Effusion Studies; Energetic Computational Studies

This internship was hosted by the Molecular and Supramolecular Thermodynamics Group at the Centro de Investigação em Química da Universidade do Porto (CIQUP), Institute of Molecular Sciences (IMS)

Highschool Level of Education

Colégio Internato dos Carvalhos [08/2015 – 07/2018]

Field(s) of study: Chemistry, Environment and Quality

Final grade: 17/20

At the end of the course, I was able to

- Master the laboratory techniques as well as operating procedures and manufacturing control in industry, services and culture;
- Know basic principles of chemistry, physics and engineering applied to environment, health and industry, in order to understand the technical functioning of a company and/or industrial unit;
- Develop abstraction capabilities based on the experimentation of real facts;
- Interpret the laws and the fundamental principles of science and applied technology;
- Perform functions inherent to quality control, either during production and/or final products, using classical and/or instrumental methods of analysis;
- Use the quality tools as a means of controlling the production process;
- Demonstrate coordination and teamwork skills in an interdisciplinary context;
- Comply with the legislation of hygiene and safety at work, highlighting the ethical and professional values to which they are bound.

WORK EXPERIENCE

Chemistry Lecturer

Superior School of Health - Porto Polytechnic [01/06/2023 – 30/09/2023]

City: Porto

Country: Portugal

Introduction to Chemistry; Super P.Porto Programme

Researcher in Physical Chemistry

Faculty of Sciences of the University of Porto [08/2021 – 09/2021]

City: Porto

Country: Portugal

I applied for two Research Initiation Scholarships under the project "Summer with Science" of the Foundation for Science and Technology (FCT) at the Molecular and Supramolecular Thermodynamics Group at Centro de Investigação em Química da Universidade do Porto (CIQUP).

"Thermophysical Study of Neocuproine" - September, 2021

"Thermophysical Study of Bathophenanthroline" - September, 2022

- Purity Control; Thermal Analysis; Effusion Studies; Energetic Computational Studies

Monitor

Junior University - University of Porto [07/2019 – 07/2023]

City: Porto

Country: Portugal

- Elaborate experimental/laboratorial Chemistry activities for teens and children (Ages between 12 and 17)
- Oversee their safety and learning objectives
- Activities only took part on the months of July of each year

Mentor

Faculty of Sciences of the University of Porto [08/2019 – Current]

City: Porto

Country: Portugal

Help stimulate social contacts with the aim of developing core competences. It also includes giving advice to younger students (mentees) on matters pertaining the university or other more personal matters. We also help in the welcoming and integration of the mentees in the faculty.

General Coordinator

Encounter of the 2023 Portuguese Chemistry Students [03/2022 – 04/2023]

City: Porto

Country: Portugal

President of the Board

NEQUP - Nucleus of Chemistry Students of the University of Porto [07/2019 – Current]

City: Porto

Country: Portugal

During the three terms of office that I was elected in these were the main activities and responsibilities that fell under my purview:

1. Elaborate an activity plan and a budget;
2. Administer the patrimony of NEQUP;
3. Execute the deliberations approved by the general assembly;
4. Represent NEQUP's members;
5. Elaborate an activity and account report that must be presented in a general assembly by the end of the term of office;
6. Keep in permanent contact with national and international organizations of interest for NEQUP;
7. Uphold the statutes of NEQUP;
8. Propose to the general assembly the exclusion/resignation of new members and accept their resignation;
9. Assure the compliance of the activity plan.

I also helped with the organization of all the activities organized by NEQUP with a particular attention to an annual chemistry congress.

Vice-President

ANEQ - Portuguese National Chemistry Students Association [05/2021 – 05/2022]

Country: Portugal

Secretary of the Board

ANEQ - Portuguese National Chemistry Students Association [04/2020 – 06/2021]

Country: Portugal

Chief of Staff

24ª Olimpíadas Ibero-Americanas de Química [08/2019 – 09/2019]

City: Porto

Country: Portugal

- Problem Solving
- Disputes Mediation
- Organization of Recreational Activities
- Staff Management

CONFERENCES AND SEMINARS

International Symposium on Chemical Thermodynamics for Young Researchers (ISCTYR)

[Laurino, Italy, 21/05/2022 – 23/05/2022]

Oral Communication: "Energetic Insights of Neocuproine"

Received the Best Oral Communication Award

Mediterranean Conference on Calorimetry and Thermal Analysis (MEDICTA 2023)

[Porto, 07/2023]

Oral Communication: "Thermophysical Analysis of Phenanthroline Derivatives - A Multitechnique Approach"

JEEP-2023 (Journées d'Etudes des Equilibres entre Phases 2023)

[Rouen, France, 10/2023]

Poster Communication: Thermophysical Insights on Bathophenanthroline and Bathocuproine

(not first author)

Junior Research of the University of Porto (IJUP 2023)

[Porto, 05/2023]

Oral Communication: "Thermophysical Properties of Bathophenanthroline: A Multitechnique Approach"

Junior Research of the University of Porto 2022 (IJUP 2022)

[Online Event, 03/05/2022]

Oral Communication: "Thermodynamic Study of Neocuproine"

ENEQUI 2022 (Portuguese Chemistry Students Encounter)

[Coimbra, Portugal, 07/04/2022 – 09/04/2022]

Poster Communication: "Physico-Chemical Characterization of Neocuproine".

LANGUAGE SKILLS

Mother tongue(s): **Portuguese**

Other language(s):

English

LISTENING C2 READING C2 WRITING C2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2

Italian

LISTENING B1 READING B1 WRITING B1

SPOKEN PRODUCTION B1 SPOKEN INTERACTION B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HONOURS AND AWARDS

Best Oral Communication

International Symposium on Chemical Thermodynamics for Young Researchers (ISCTYR) [05/2022]