



Imen Cherif

PROFESSIONAL AND WORK EXPERIENCE

[01/04/2023 – 30/05/2023]

PhD Internship 2- Department of Mathematics, Computer Science, Physics, and Earth Science (MIFT), University of Messina, Italy

Supervision: **Prof. Maria Teresa Caccamo**

Main activities:

- Chemical synthesis and characterized of hybrid materials using RAMAN, FTIR, SEM, TEM, and XRD techniques.
- Combined experimental and theoretical study was used towards a better examination of the properties of investigated materials

[05/10/2022 – 31/03/2023]

Phd Internship1-With The Erasmus+ KA107 Programme - Characterization Of Systems Of Biophysical Interest By Means Of Complementary Spectroscopic Techniques. " At MIFT Department, University Of Messina, Italy

Supervision: **Prof. Maria Teresa caccamo**

Main activities:

- Synthesis and the experimental and theoretical study of new hybrid material based on Hydroxyapatite (HAP) and Polyethylene glycol (PEG600).
- Integrated use of experimental investigation techniques for the structural and dynamic characterization of systems of biophysical interest.
- A wide class of experimental techniques is used for this type of study, such as infrared spectroscopy (Vertex 70V, Vertex 80V and Alpha IR, Bruker Optics), Raman spectroscopy (Jobin-Yvonne T64000 Horiba, Bruker-BRAVO).

[01/02/2019 – 15/06/2020]

Physical-Chemical Teacher at "L'AVENIR"private pilot Secondary School- Kairouan,Tunisia

Main activities:

- Prepared and evaluated chemistry and physics lessons, aligning them with the school's study plans and educational project.
- Developed and corrected exams, ensuring effective assessment of student learning.

[01/03/2018 – 15/12/2018]

Internship of End of studies project of master's degree in physics: Innovative Materials and Energy Management' at "Asymmetric Synthesis and Molecular Engineering of Materials New for Organic Electronics laboratory: Faculty of Monastir Sciences

Supervision: **Prof: Mohamed M'barek**

Main activities:

- Experimental studies of film and nanowires of a new vinylcarbazole-stilbene conjugated copolymer (VK-Stilbene) and theoretical modeling.
- Anticipating and designing new copolymers soluble in organic solvents with original photophysical properties that will serve as active layers in organic electronic devices.
- Studying the vibrational structural and photo-physical properties by combined experimental and theoretical analysis

[01/09/2015 – 30/09/2016]

Internship preparation: teacher in a primary school at private primary school "ASSAFIR ELJANNAH" Bouhajla-Kairouan, Tunisia

Main activities:

- Preparation for integration into working life by understanding pedagogical methods mastered.

[01/02/2015 – 30/05/2015]

Internship Of End Of Studies Project Of Bachelor Degree In Physics At AFRIMED (Company Name: AFRIQUIA MEDICAMENT S.A.) Tunisian Veterinary Pharmaceutical Laboratory- Sousse, Tunisia

Main activities:

- Manufacture of medicines: Quality control of veterinary pharmaceutical specialties (Enroflox 10% and Afridigest).
- Focus on quality control of veterinary pharmaceutical specialties.
- Conducting quality control procedures for Enroflox 10% and Afridigest.
- Performing tests to assess the composition, stability, and potency of the pharmaceuticals.
- Collaborating with professionals to ensure compliance with regulatory standards.
- Analyzing data, generating reports, and documenting observations.
- Adhering to safety protocols and guidelines throughout the internship.

[20/06/2014 – 20/07/2014]

Voluntary Internship - laboratory of Blood analysis department in the Bouhajla Hospital: Bouhajla- kairouan, Tunisia

Main activities:

- Blood analysis techniques and its protocols:
- Performing Complete Blood Count (CBC) tests, following protocols for blood collection and using automated machines for analysis.
- Conducting blood chemistry tests to measure specific substances, adhering to protocols for sample handling and utilizing specialized equipment.
- Carrying out blood glucose tests, including sample collection and accurate usage of glucose meters or test strips.
- Assisting in blood culture procedures, maintaining sterile techniques to minimize contamination.
- Participating in genetic testing, collecting samples and assisting in DNA extraction using PCR and sequencing techniques.
- Following ethical guidelines, ensuring patient confidentiality, and adhering to laboratory safety regulations.
- Recording and documenting data accurately and maintaining compliance with
- quality control measures.

EDUCATIONAL QUALIFICATIONS

[01/09/2020 – 07/03/2024]

THESIS IN PHYSICS. SUBJECT: Theoretical and experimental studies of the structural and optoelectronic properties of π -conjugated organic push-pull materials for organic electronics

Laboratory of Physico-Chemistry of Materials (LR01ES19), Faculty of Sciences of Monastir
Address: Avenue of the environment, 5019 Monastir-Tunisia

[01/09/2016 – 21/01/2019]

Research Master's Degree: Innovative Materials and Energy Management

At Faculty of Sciences of Gafsa- University of Gafsa -Tunisia

[01/08/2012 – 30/06/2015]

Bachelor's degree in Applied physics: materials

At ISSAT Mahdia-University of Monastir, Tunisia

TRAINING

[24/01/2023]

Training on "Opportunities for Financing RD &I Programmes in Biotechnology

Organised as part of the Research, Development & Innovation (RD &I) WPII of the BiotechTunisia project, at University of Monastir, Tunisia.

[07/11/2022 – 12/01/2023]

Training in Italian language A1-A2 level within the theme " the Erasmus+ programme " (32hours),

AUniversity of Messina, Italy

[04/07/2022 – 22/07/2022]

Training in "Academic English Writing and Presentation"

Organized by Entrepria and Pinnacle Education, Monastir-Tunisia

[04/12/2021 – 05/12/2021]

Certificate of participated in the Workshop titled "Molecular Docking And Drug Design"

Organized by Tunisian Association of Psycho-Neuro-Endocrino-Immunology (AT-PNEI) and Held in the Higher Institute of Biotechnology in Monastir, Tunisia

[05/04/2021]

Training on "Choice of research topic and collaborations "

Organized by ELSEVIER- Researcher Academy on Campus at Afrique du Nord

[01/03/2021 – 05/04/2021]

Training in English language with the theme "ENGLISH FOR PRESENTATION" (21hour),

At Faculty of Sciences of Monastir, Tunisia

[04/02/2021 – 05/02/2021]

Training in the Annual Reviews training session

Organized by Cundst/ Annual reviews/ Accucoms

[03/02/2021]

Training in "Contenu et Processus de Soumission d'Articles" by SPIE training

Organized by Cundst/ Annual reviews/ Accucoms

[20/06/2018 – 20/09/2018]

Professional Training in French language: B1-B2 level

At Smart PRO Training Centre Sousse-Tunisia

[22/02/2017]

Training in "Entrepreneurship from idea to implementation."

Organized By ANETI and UGAA organization, at Faculty of Science of Gafsa -Tunisia

SKILLS AND EXPERTISE

EXPERTISE

Density Functional theory- Molecular Modeling- Optoelectronics- Computational Materials Science- Material characterization – Materials- Adsorption-Inorganic Materials, organic Materials, hybrid Materials; Organic LightEmitting Diodes, FT-IR spectroscopy, Raman spectroscopy

LANGUAGE SKILLS

Arabic: Mother Language

English: Proficient user

French: Proficient user

Italian: Basic user

CONFERENCES AND SEMINARS

[19/12/2023] Messina, Italy

International Workshop on Extremophiles: From Adaptive strategies To Biotechnological Applications; Messina, Italy; Accademia Peloritana dei Pericolanti. «Exploration of intramolecular interaction and OH stretching analysis of Hydrated Lysozyme in presence of Trehalose: Experimental and Theoretical analysis»

Imen Chérif, D.Bouazzi , M. T. Caccamo, S. Magazù, B. Badraoui S. Ayachi, AAPP 2024

[19/12/2023] Messina, Italy

International Workshop on Extremophiles: From Adaptive strategies To Biotechnological Applications; Messina, Italy; Accademia Peloritana dei Pericolanti. «Exploration of intramolecular interaction and OH stretching analysis of Hydrated Lysozyme in presence of Trehalose: Experimental and Theoretical analysis»

D.Bouazzi , **Imen Chérif**, M. T. Caccamo, S. Magazù, S. Ayachi, B. Badraoui, AAPP 2024

[24/06/2022 – 26/06/2022] Monastir, Tunisia

5th International Conference on Smart Materials and Spectroscopy (SMS'2022) . "Analysis of the intra-molecular charge transfer in para-substitued nitrobenzofurazan (NBD): A combined experimental and DFT computation study,"

Imen Chérif, Hanen Raissi, Taoufik Boubaker and Sahbi AYACHI,

[24/06/2022 – 26/06/2022] Monastir, Tunisia

5th International Conference on Smart Materials and Spectroscopy (SMS'2022) . "Intra-molecular charge transfer effect on linear and nonlinear optical properties in sulfide group parasubstituednitrobenzofurazan moiety: A DFT computational investigation"

Balkis ABDELAZIZ, Imen Chérif, Sahbi AYACHI

PUBLICATIONS

A theoretical and electrochemical impedance spectroscopy study of the adsorption and sensing of selected metal ions by 4-morpholino-7-nitrobenzofuran **Imen Chérif**, B. Gassoumi, H. Ayachi, M. Echabaane, M.T. Caccamo, S. Magazù, A. H.Said, T. Boubaker, S. Ayachi. **Heliyon (2024)**, 133442

Quantum Computational Investigation into Optoelectronic and Topological Properties of a Synthesized Nanocomposite Containing Hydroxyapatite-alt-Polyethylene Glycol (HAP/PEG) **Imen Chérif**, D. Bouazzi, M. T. Caccamo, S. Magazù, B. Gassoumi , B. Badraoui, S. Ayachi. **J. Colloids and Surfaces A: Physicochemical and Engineering Aspects (2024)**, 133442

Exploring High-Performance Functionalized Corannulene Dimers: A DFT-Based Investigation for Novel Photovoltaic Applications H, Hadi, B, Chouchen, S, Nasr, G, Bouzid, **Imen Chérif**, A. Basha, A. Kubaib, P. Mohamed Imran, M. T. Caccamo, T. Ladhari, S. Ayachi" **Synthetic Metals. (2024)** 117543

Linear and Nonlinear Optical Responses of Nitrobenzofurazan- Sulfide Derivatives: DFT-QTAIM Investigation on Twisted Intramolecular Charge Transfer.

B. Abdelaziz, **Imen Chérif**, B. Gassoumi, S. Patanè, S. Ayachi" **J. Phys. Chem. A (2023)**, 127, 9895–9910

A joint experimental and theoretical study on Structural, Vibrational and morphological properties of newly synthesized nanocomposites involving Hydroxyapatite-alt-Polyethylene Glycol (HAP/PEG) D.Bouazzi, **Imen Chérif**, A. Mehri, H. Touati, M. T. Caccamo, S. Magazù, S. Ayachi, J.M. Clacens, B. Badraoui, **Journal of Molecular Liquids**, 390 (2023) 23192..

Photophysical and nonlinear optical properties of para-substituted nitrobenzofurazan: A comprehensive DFT investigation,

Imen Chérif, H. Raissi, K. Abiedh, B. Gassoumi, M. T. Caccamo, S. Magazu, A.Haj Said, F. Hassen, T. Boubaker, S. Ayachi **Journal of Photochemistry & Photobiology, A: Chemistry** 443 (2023) 114850

Computational studies on optoelectronic and nonlinear optical properties of para-substituted nitrobenzofurazan compound Imen Chérif, H. Raissi, K. Abiedh, B. Gassoumi, M.

T. Caccamo, S. Magazu, A.Haj Said, F. Hassen, T. Boubaker, S. Ayachi, **Materials Today Communications**, 35 (2023) 106133.

Exploration of intramolecular charge transfer in para-substituted nitrobenzofurazan:

Experimental and theoretical analyses Imen Chérif, H. Raissi, K. Abiedh, B. Gassoumi, M.

T. Caccamo, S. Magazu, A.Haj Said, F. Hassen, T. Boubaker, S. Ayachi, **Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy** 301 (2023) 122939

Structure-property relationships in Para-substituted Nitrobenzofurazans: Electrochemical, Optical, and Theoretical Analysis

H. Raissi, Imen Chérif, I. Aribi, H. Ayachi, A. Haj Said, S. Ayachi, T. Boubaker, **Chem. Pap.** 76 (2022) 4059-4080.

Structure-property relationships in benzofurazan derivatives: A combined experimental and

DFT/TD-DFT investigation H.Raissi, Imen Chérif, H. Ayachi, H. Said Ayoub, F. Hassen, A.Sahbi, T.

Boubaker, published in the book edition "Density functional theory - recent advances, new perspectives and applications", by: Dr. Daniel Glossman-Mitnik(2021).

Aware of the consequences of making false statements, falsehood of acts and use of false facts, punishable by law according to art. 76 D.P.R. n. 445/2000 and art. 496 of the Italian Penal Code, under my own responsibility I declare that the information reported in the CV is accurate and truthful. In compliance with the law 196/03, I authorize the treatment and protection of personal data concerning me.

23/05/2024

Imen Cherif