

Curriculum Vitae

HELA FERJANI

Nationality: Tunisian

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Date of Birth: 01-12-1984

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EDUCATION

2014: PhD Degree in Chemistry at Faculty of Science in Tunisia (with high honors).

2010: Master Degree in Solid State Chemistry at Faculty of Science in Tunisia (Very good).

2008: Bachelors Degree in Physical Sciences at Faculty of Science in Tunisia.

2003: Baccalaureate Level in Experimental Sciences.

SCIENTIFIC ACTIVITIES

Research: Laboratory of Materials and Crystallography, Faculty of sciences in Tunis-Tunisia.

About Majester & PhD: Synthesis, Structural characterization & physic-chemical studies of organic-inorganic hybrid materials based on bismuth (Organometallic chemistry).

Supervisor: Habib Boughzala

- Professor at EIPEIN Nabeul –Tunisia.
- Researcher at University of Tunis El Manar - Department of Chemistry - Laboratory of materials and crystallography.
- Vice President of Tunisian Association of Crystallography.

Key words: X-Ray diffraction, Organic-inorganic materials (Organometallics), Metal organic frameworks, Infrared Spectroscopy, UV-Visible spectroscopy, Luminescence, Semi-conducting, Modelization, optics.

Laboratory Skills:

- Employing the CAD-4 Enraf-Nonius X-ray diffractometer (Single crystal), the D8 ADVANCE BRUKER diffractometer (powder crystals) and FTIR- spectrophotometer.

- Computational Chemistry Programs (WinGX 1.8, Diamond 3, Origin 5, CaChe Modelization software....)

Publications:

1- Synthesis, Structural, and IR studies of tris(2-ammonioethyl)aminium chloride hexachlorobismuthate(III) : $\{(C_2H_4NH_3)_3NH\}^{4+} \cdot Cl^- \cdot [BiCl_6]^{3-}$.

Hela Ferjani, Habib Boughzala and Ahmed Driss., *Journal de la Société Chimique de Tunisie* 13 (2011) 203-209.

2-Poly[bis(1-carbamoylguanidinium)[tri- μ -chloridodichloridobismuthate(III)]] $\{(C_2H_7N_4O)_2[BiCl_5]\}_n$.

Hela Ferjani, Habib Boughzala and Ahmed Driss., *Acta Crystallographica* (2012). E68, m615.

3- Synthesis, Crystal Structure, and Characterization of a New Organic-Inorganic Hybrid Material: $(H_3AEP)_2 \cdot (BiCl_6) \cdot 3Cl \cdot 2H_2O$.

Hela Ferjani, Habib Boughzala and Ahmed Driss., *Journal of Crystallography*, Hindawi Publishing Corporation, (2013) 1-8. <http://dx.doi.org/10.1155/2013/658939>

4- New Quasi-One-Dimensional Organic Inorganic Hybrid Material: 1,3-Bis(4-piperidinium)propane Pentachlorobismuthate(III): Synthesis, Crystal Structure and Spectroscopic Studies.

Hela Ferjani and Habib Boughzala., *Journal of Materials*, Hindawi Publishing Corporation, Volume 2014, Article ID 253602, 8 pages. <http://dx.doi.org/10.1155/2014/253602>

5- Article 5 in progress (Under Submission): A new hybrid material: $(C_3H_6N_3)_4 Bi_2Cl_{10}$; Synthesis, structural study and spectroscopic behavior.

Hela Ferjani and Habib Boughzala (Accepted in *Russian journal of inorganic chemistry-Springer*).

Presentations:

1. **Poster communication:** « Synthesis, Crystal Structure and Characterization of Poly[bis(1-carbamoylguanidinium) [Tri-chlorido-dichloridobismuthate(III)]]: $\{(C_2H_7N_4O)_2[BiCl_5]\}_n$ (Quantum Wire) », *Third Tunisian Crystallographic meeting* organized by the Chemical Society of Tunisia, Monastir , 07- 09 April 2013.

Authors: **H. Ferjani**, H. Boughzala.

2. **Oral communication:** «Synthesis, Crystal structure, Vibrational studies of a new quantum dot organic-inorganic hybrid material $(\text{H}_3\text{AEP})_2 \text{BiCl}_6 \cdot 3\text{Cl}(\text{H}_2\text{O})_2$ ». *17th Nationals Days of Chemistry* organized by the Chemical Society of Tunisia, 17-20 December **2012**, Monastir, Tunisia.

Authors: **H. Ferjani**, H. Boughzala, A. Driss

3. **Poster communication:** «Synthesis, crystal structure and physical-chemical study of a novel quantum Dot $\{(\text{C}_2\text{H}_4\text{NH}_3)_3\text{NH}\}^{4+} \cdot \text{Cl}^- \cdot [\text{BiCl}_6]^{3-}$ ». *5th Days of Solid State Chemistry* organized by the Chemical Society of Tunisia, 21-24 December **2011**, Zarzis, Tunisia.

Authors: **H. Ferjani**, H. Boughzala, A. Driss

4. **Poster communication:** «Synthesis, crystal structure and physical-chemical study of a quantum wire hybrid based on $[\text{C}_6\text{H}_{28}\text{N}_2]^{2+}[\text{BiCl}_5]^{2-}$ ». *16th Nationals Days of Chemistry* organized by the Chemical Society of Tunisia, 19-22 December **2010**, Hammamet, Tunisia.

Authors: **H. Ferjani**, H. Boughzala, A. Driss.

Reviewer to:

Journal of physics and chemistry of solids (PCS@elsevier.com)

Committees:

Member of committee of curricula and study plans at Umm Al Qura University during 2014-2016.

WORK EXPERIENCE

In Tunisia

- For years at Faculty of sciences in Tunis (University Tunis El Manar)
 - Lecturer during the academic year **2010-2011**: having attended the General Chemistry Lab Section LAPH1 (Applied License in physics) and Inorganic Chemistry Section LFCH2 (Fundamental License in Chemistry).
 - Lecturer during the academic year **2011-2012**: having attended the Inorganic Chemistry Lab Section LACH1 (Applied License in chemistry).
 - Lecturer the Inorganic and general Chemistry Lab Section LACH1 and IC3 (Chemistry engineering) during this academic year **2012-2013**.

- Lecturer the general and inorganic Chemistry Section LFST1 (Fundamental License in earth sciences) and LFPC2 (Fundamental License in physics and chemistry) during this academic year **2013-2014**.

In KSA

- *Two years Assistant professor at Umm Al Qura University (2014-2016)*
- *Assistant professor at Al Imam Mohammad Ibn Saud Islamic University from 2016 to present.*

Teaching: General chemistry (101 Chem), (103 Chem) / Inorganic Chemistry (chemistry of transition elements / Chemistry of S and P elements) / Quantum chemistry / Nuclear and Radiation chemistry / Surface, Catalysis and Colloids Chemistry / Chemical kinetics / Advanced topics in inorganic chemistry / Crystallography (Solid state chemistry) / Spectrum chemistry / coordination chemistry and spectrum / thermodynamic chemistry/ Organometallic Chemistry.

ADDITIONAL INFORMATION

➤ LANGUAGE LEVEL KNOWLEDGE

Arab: Mother tongue

French: Excellent

English: Good.

➤ COMPUTER SKILLS

Proficiency in the use of computer applications in chemistry:

- Dealing with storing programs and classification of chemical materials.
- Studying constructive compositions of different crystals.
- Using applications of drawing and writing chemical equations

Microsoft Office: Word, Excel, Power Point & Paint

Internet Skills: Browsing the web.