

Curriculum vitae

Teacher-researcher and Lecturer A at Abbes Laghrour Khenchela University

Name: Rim First name: Benali-Cherif.

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Civil status

August 20, 1987, Khenchela (Algeria). Married, two child

Diplomas:

- **Baccalaureate 2005**-sciences-

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- **License in chemistry** July 2008 (LMD –Material sciences-).

 Titled “*Amino acids in crystallography*” score: 19/20.

-**Master in chemistry** July 2010 (physics and chemistry of condensed matter, LMD-SM).

 Thesis name’s “*Hybrid compounds based of acids ortho and methaaminobenzoic: Synthesis and characterization by X-ray diffraction and spectroscopy infraRed* “ score: 17/20

- **PhD (Doctorat)** June 2014 (physics and chemistry of condensed matter, LMD-MS).

 Thesis entitled « *Polymorphism, structural analysis and optical properties of semi-organic compounds based on amino acids* »

- **HDR (Habilitation à diriger des recherches/Authorization to direct research).** December 2020

International Publications:

1/ «Exploring a new creatininium crystalline salt with succinic acid organic counterion: Structural establishment, spectroscopic analysis and theoretical simulation»

W. Falek, R. Takouachet, **R. Benali-Cherif**, S. Baaziz, N. Benali-Cherif. Inorganic Chemistry Communications 159 (2024) 111806

2/ «Crystal engineering of a new pharmaceutical polymorph of gallic acid monohydrate: a structural comparative study and chemical computational quantum investigations»

N. Ghouari, **R. Benali-Cherif**, R. Takouachet, W. Falek, D. Missaoui, A. Rahmouni, E-E. Bendeifc and N Benali-Cherif. CrystEngComm, 2023, 25, 6279–6290

3/ «Crystal Structure, Hirshfeld Surface Analysis and IR Analysis of 2-Amino-1, 9-Dihydro-6H-Purin-6-One-Selenate-Water»

S Baaziz, EB Poyraz, **R Benali-Cherif**, W Falek, B Hannachi, N Dege, E Bendeif, N Benali-Cherif.

Journal of Structural Chemistry volume 64, pages1350–1359 (2023).

4/ «Synthesis, crystal structure, DFT calculations, Hirshfeld surface analysis and molecular docking studies of a new manganese complex»

AA Derardja, L Golea, **R Benali-Cherif**, D Luneau, Z Boutobba, Youcef Boumedjane, Hassina Harkat
Volume 146, December 2022, 110198. *Inorganic Chemistry Communications*.

5/ «Synthesis, crystal structure and catalytic activity of the new hybrid phosphate (C₄H₁₂N₂) [Co(H₂O)₆](HPO₄)₂»
Hidaoui,S., Hamdi, N., Akouibaa, M., **Benali-Cherif., R.**, Vaclav, E., Dusek, D., Lachkar, M., El Bali, B.
Journal of Molecular Structure (2022) 133296.

6/ «The supramolecular behavior and molecular recognition of adeninium cations on anionic hydrogen selenite/diselenite frameworks: A structural and theoretical analysis »

Takouachet, R., **Benali-Cherif, R.**, Bendeif, E-E., Jelsch, C., Yahia Cherif, F., Rahmouni, A., Benali-Cherif, N.
Journal of Molecular Structure 1229 (2021) 129836.

7/ « Synthesis, structural elucidation, spectroscopic, Hirshfeld surface analysis and theoretical simulation of a new adeninium orthoperiodate (1 –) bis(hydrate) organic–inorganic hybrid crystals»

Benali-Cherif, R., Takouachet, R, Falek, W, Benali-Cherif, N, Jelsch, C, Merazig, H, Hafied, M, - Bendeif, E-E, Bouslah Mokhnachi, N, Taibi, K. *Journal of Molecular Structure* 1224 (2021) 129034.

8/ «Transfer Of Protons Into A New Organic Compound Based On Creatinine»

Falek, W, **Benali-Cherif, R.**, Takouachet, R, Benali-Cherif, N. *MDPI* (2022)

9/«The importance of charge-charge interactions in shaping supramolecular hybrid compounds adeninium based»

Rim Benali-Cherif, Radhwane Takouachet, El-Eulmi Bendeif, Christian Jelsch, Nourredine Benali-Cherif, Ali Rahmouni. *MDPI* (2021)

10/ « A structural comparative study of charge transfer compounds: Synthesis, crystal structure, IR, Raman-spectroscopy, DFT computation and hirshfeld surface analysis »

Falek, W, **Benali-Cherif, R.**, Golea, L, Samai, S, Benali-Cherif, N, Bendeif, E.-E, Daoud, I. *Journal of Molecular Structure*. 1192 (2019) 132-144

11/ «Nonlinear optical organic–inorganic crystals: synthesis, structural analysis and verification of harmonic generation in tri-(o-chloroanilinium nitrate) »

Athmani, H., Kijatkin, C., **Benali-Cherif, R.**, Pillet, S., Dominik Schaniel, Imlau, M., Benali-Cherif, N., Bendeif, E-E. *Acta Cryst, Foundations and advances*. A75 (2019) 107-114.

12/ «Structural analysis and IR spectroscopy of a new anilinium hydrogenselenite hybrid compound: a subtle structural phase transition

R. Takouachet, **R. Benali-Cherif**, E.-E. Bendeif and N. Benali-Cherif. *Acta Cryst.* (2019). A75, e472

13/ « Correlation between structural studies and third-order NLO properties of three new semi-organic compounds»

R. Benali-Cherif, R. Takouachet, E.-E. Bendeif and N. Benali-Cherif. *Acta Cryst.* (2019). A75, e575

14/ **Publication of a book on May 05, 2017** entitled « Corrélations structures propriétés ONL de 3 nouveaux composés hybrides » in the “*Éditions Universitaires Européennes* »

R. Benali-Cherif, R. Takouachet and N. Benali-Cherif

15/ «Structural analysis and IR-spectroscopy of a new anilinium hydrogenselenite hybrid compound: A subtle structural phase transition»

Takouachet, R., **Benali-Cherif, R.**, El-EulmiBendeif., Benali-Cherif, N., Pillet, S., Schaniel, D. *Inorganica Chimica Acta*. (2016). **446**.6–12.

16/ «The structural properties of a noncentrosymmetric polymorph of 4-aminobenzoic acid»

Benali-Cherif, R., Takouachet, R., Bendeif, E-E. and Benali-Cherif, N. (2014). *Acta Cryst. C70*, 323–325.

17/ «A comparative study of two polymorphs of L-aspartic acid hydrochloride»

Benali-Cherif, R., Takouachet, R., Bendeif, E-E. and Benali-Cherif, N. (2014). *Acta Cryst. C70*, 689-692

18/ «Cytosinium hydrogen selenite»

Takouachet, R., **Benali-Cherif, R.** and Benali-Cherif, N. (2014). *Acta Cryst. E70*, o186–o187.

19/ « Hydrogen bonding in 1-carboxypropanaminium nitrate »

A. Messai, **R. Benali-Cherif**, E. Jeanneau and N. Benali-Cherif . *Acta Cryst.* (2012). **E68**, o1307-o1308

20/ « trans-Diaquabis(DL-valinato- κ^2 N,O)nickel(II) »

A. Messai, **R. Benali-Cherif**, E. Jeanneau and N. Benali-Cherif. *Acta Cryst.* (2011). **E67**, m1204

21/ « Structural study of amino acid salts consisting of mineral anions»

R. Benali-Cherif, A. Direm and N. Benali-Cherif. *Acta Cryst.* (2009). **A65**, s184

Activities

Treasurer and member of the executive committee of the African Crystallographic Association (AFCA) and representative of zone 1 (Morocco, Tunisia, Algeria, Mali, Niger, Mauritania)

Communications:

- First international Conference on Materials Science and Applications (ICMSA'23). February, 8-9 2023.
- Workshop on: Structural resolution by single crystal and powder X-ray diffraction + Remote control of a single-crystal diffractometer (November, 6-7 2022).
https://www.iucr.org/news/newsletter/etc/articles?issue=155353&result_138339_result_page=22&fbclid=IwAR3J9PcourxuDRJgWxnrWb62yoh4wgGdkJXOraOIW2j-QRMBCZ_oS3VDWNA
- Tunisian Powder Diffraction School Monastir, Tunisia, 27-30 March 2022 (Remote participation)
- Third Pan African Conference on Crystallography Online (ePCCr) / from November 15 to 19, 2021.
- The 7th International Electronic Conference on Medicinal Chemistry. 01-30 November, online (ECMC 2021) (MDPI).
- The 25th Congress of the International Union of Crystallography. Prague, Czech Republic/ From August 14 to 22, 2021.
- Virtual 4th international symposium on halogen bonding (ISXB 4) from 2 – 5 November 2020 at Stellenbosch University in Stellenbosch, South Africa.
- Second Pan African Conference on Crystallography (PCCr2) / from January 28th till February 02nd, 2019. University of Accra, Ghana.
- First Pan African Conference on Crystallography (PCCr1) / October 6-10, 2016 University of Dschang, Cameroon.

- The first Algerian Congress of Caractérisation, Properties and Modeling of Composite Materials (CACPM3C-2015)/ Khenchela, Algeria –May 19-21, 2015
- 5Th Morocco School of Crystallography (EMC5) (Saidia/ Oujda/ Morocco / 24 -26 octobre 2013).
- 3rd Tunisian Crystallographic MeetingTCM3- Monastir – Tunisia, April 07-09, 2013. January 14-18, 2013. Abbas Laghrour University-Algeria.
- July, 6-13, 2012, Abbas Laghrour University-Algeria. “*Summer University for Scientific Research and Advanced technologies: Innovation and Valorization*”
- International Congress of Crystallography CRAC4 in Algeria (May 2011)
- European Crystallographic Meeting (ECM 25) in Istanbul-Turkey (August 2009)

Internships :

- **AFRAMED** (Appui à la Formation et la Recherche en Afrique par des Mesures à Distance) training (Diffractometry training) at université de Lorraine-Nancy France, during one month from August 28 to September 23, 2023.
- Internship at nuclear center of Draria (Algiers- Algeria).
- Internship at laboratory of new phases (UM-Constantine- Algeria).
- Internship at University of Lyon 1ClaudeBernard (France) during 1 month.
- Many Internships at University of Lorraine- Nancy (France).

Languages and data processing

Arabic-French and English.

CSD Software,APEX, OLEX, WingX, CrystalExplorer (*Hirshfeld* surface), Diamond, Origine, Opale, Vue, Word, Excel, PowerPoint.