

CURRICULUM VITAE

Prof. Abdelkader CHOUAIIH

الأستاذ: عبد القادر شوايح

Faculty of Science and Technology — Abdelhamid Ibn Badis University of Mostaganem — 2026

1. Personal Information

Name	CHOUAIIH Abdelkader
Date and place of birth	25/08/1974 – Oued Rhiou (48300), Algeria
Research laboratory	Laboratory of Technology and Solid Properties (LTPS), Abdelhamid Ibn Badis University of Mostaganem
Professional address	Faculty of Science and Technology, Abdelhamid Ibn Badis University of Mostaganem, 27000 Mostaganem, Algeria
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Languages	Arabic, French, English

2. Professional Positions

Current rank	Professor (National University Council Decree N°31 of 26 December 2013)
Since 2002	Teacher-Researcher at the University of Mostaganem
2016 – 2022	Director of the Laboratory of Technology and Solid Properties (LTPS)
2018 – 2022	Mission officer at the Vice-Rectorate for Postgraduate Higher Education, University Habilitation, Scientific Research and Postgraduate Advanced Training
Since 2014	Head of the Master's program "Materials Process Engineering"
2013 – 2015	Vice-Dean for Postgraduate Studies, Scientific Research and External Relations, Faculty of Science and Technology
2012 – 2013	Mission officer to the Vice-Rector for Postgraduate Studies and Scientific Research
2008 – 2009	Deputy Head of the Chemistry Department

3. Education and Degrees

Degree obtained (graduate / postgraduate)	Year	Institution
Habilitation to Supervise Research (HDR) – Materials Science	2008	University of Mostaganem
PhD in Sciences – Materials Science	2006	University of Mostaganem
Magister (M.Phil.) – Materials Science	2002	University of Mostaganem
State Engineer in Industrial Chemistry	1998	University of Mostaganem
Baccalaureate, Mathematics	1993	H. Boumediene High School – Oued Rhiou

4. Areas of Expertise

Scientific research (specialities)

- Structure of materials (powders and single crystals)
- Molecular modelling
- Crystallography
- Construction materials

Teaching (courses taught)

- X-ray diffraction techniques (lectures, tutorials, labs)
- Group theory and crystal symmetry
- Chemical kinetics and catalysis
- Analytical chemistry and methods of analysis
- Chemical thermodynamics
- Classification and structure of materials
- Industrial furnace technology
- Polymeric and composite materials
- Crystallography
- Construction materials: binders

5. Research Projects and Programs

Principal investigator

1. Synthesis, structure and reactivity of certain thiazolidinone derivatives (2019) — Ministry of Higher Education and Scientific Research
2. X-ray diffraction structural study and molecular modelling of biologically active molecules (2015) — Ministry of Higher Education and Scientific Research
3. New organic photovoltaic compounds for solar energy: synthesis and structure (2013) — Ministry of Higher Education and Scientific Research

Team member

1. Heterocyclic compounds of pharmaceutical interest: synthesis, structure and applications (2023) — Ministry of Higher Education and Scientific Research
2. Structure of materials with nonlinear optical properties (2007) — Ministry of Higher Education and Scientific Research

6. Scientific Output

131 international publications in internationally recognized journals.

1. A. R. Guerroudj, E. U. Mughal, N. Naeem, H. A. Alrafai, A. Y. Abdullah Alzahrani, M. Fathalla, M. Damou, A. Chouaih, Structural and electronic insights into vanillin sulfonates: a spectroscopic and DFT study, *Structural Chemistry*, 1-20, (2026). <https://doi.org/10.1007/s11224-026-02837-y>
2. A. Zerhouni, M. Termoul, Z. D. Benyahlou, A. Çoruh, A. Chouaih, B. Bestani, N. Benderdouche, N. Kheddami, J. Kajima Mulengi, Integrated experimental and computational study of a thiazolidinone hydrazone: Insights into reactivity, drug-likeness, and molecular docking behavior, *Functional materials*, 33 (2), 282-297 (2026). <http://dx.doi.org/10.15407/fm33.02.282>
3. A. Benkanoun, M. H. M. Belhachemi, S. Djehni, F. Balegroune, A. Chouaih, N. E. H. Belkafouf, Synthesis, structural investigation, thermal behavior, Hirshfeld analysis, DFT computation and molecular docking of a new magnesium diphenate coordination polymer, *Journal of Coordination Chemistry*, 79(11), 1305-1325 (2026). <https://doi.org/10.1080/00958972.2026.2689684>
4. S. Sambandam, A. Ramalingam, A. R. Guerroudj, M. Ramasamy, M. Thiyagarajan, B. Arumugam, A. Arumugam, M. Saidj, A. Chouaih, A. Y. Abdullah Alzahrani, Synthesis, Spectroscopic Characterization, DFT

Analysis, and Molecular Docking Studies of a Nitrosopiperidin-4-one Derivative toward Antiviral Applications, *Journal of Computational Biophysics and Chemistry*, (2026). <https://doi.org/10.1142/S273741652650095X>

5. N. Benhalima, N. Boukabcha, S. Chetoui, A. Chouaih, Molecular structure, theoretical and experimental vibrational spectroscopy, NBO investigation, RDG, IRI, AIM analyses, and NLO study of 1-[(E)-2-(5-chloro-2-hydroxyphenyl) hydrazine-1-ylidene] naphthalen-2(1H)-one, *ChemistrySelect* 11(20):e73530 (2026). <https://doi.org/10.1002/slct.73530>
6. Z. D. Benyahlou, F. Triki Baara, S. Yahiaoui, M. Saidj, K. Dermeche, M. Harir, Y. Megrouss, A. Djafri, A. Chouaih, H. Bendif, W. Elfalleh, T. H. Taha, A. A. Chaudhary, S. Garzoli, Atom-in-Molecule Analysis, Density Function Theory Research, Spectroscopy, Charge Transfer, and (Static, Dynamic) Nonlinear Optical Effects of (Z)-4,4'-Bis[3-N-Ethyl-2-N'-(Phenylimino) Thiazolidin-4-One] Methane, *ChemistryOpen*, 15(6), e70205, (2026). <https://doi.org/10.1002/open.702057>
7. Z. D. Benyahlou, M. H. M. Belhachemi, A. Oueslati, Ö. Tamer, S. Yahiaoui, M. Azayez, Y. Megrouss, S. A. Kaas, A. Chouaih, Y. Atalay, Electronic Structure, Nonlinear Optical Response, and Non-Covalent Interactions in Bi-(2-Amino-5-Methylpyridinium) Hexachlorostannate: Experimental and DFT Investigation, *Physics of the Solid State*, 68, 449–463, (2026). <https://doi.org/10.1134/S1063783425604291>
8. N. E. H. Belkafouf, S. Chetoui, R. Rahmani, O. Al-Dossary, M. Saidj, N. Boubegra, L. G. Bousiakou, A. Chouaih, N. Issaoui, Experimental and theoretical investigation of photoinduced electronic transitions and charge-transfer properties in a novel azo compound: (E)-1-((3-Methoxyphenyl)diazonyl)naphthalen-2-ol, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 360, 128062 (2026). <https://doi.org/10.1016/j.saa.2026.128062>
9. M. Medjekane, Y. Nait Bachir, Z. D. Benyahlou, F. Nemar, H. Medjahed, S. Ali Haimoud, M. Sadoud, H. Naas, A. Nehari, M. Mansouri, C. Mimouni, A. Chouaih, R. Foligni, *Juniperus phoenicea* L. Essential Oil from Ain El Orak (Algeria): Chemical Analysis by GC/MS, In-Vitro Antioxidant and In-Vivo/In-Silico Gastroprotective and Hepatoprotective Effects, *Foods*, 15, 1667, (2026). <https://doi.org/10.3390/foods15101667>
10. M. Benzekri Benallou, N. Douara, Z. Mekibes, S. Yaslam Saleh Gamal, B. Bestani, N. Benderdouche, A. Chouaih, Preparation and Characterization of activated carbon prepared from pomegranate peel for efficient removal of Rhodamine B and Acid Red 114 dyes, *Iranian Journal of Chemistry and Chemical Engineering*, (2026). <https://doi.org/10.30492/ijcce.2026.2083568.7450>
11. H. Messiad, T. Yousfi, S. Hayaham, Z. D. Benyahlou, A. Bouhadiba, K. Belguidoum, H. Belbah, F. Z. Hmnamdia, L. Nouar, F. Madi, A. Chouaih, H. Amira-Guebailia, Cyclodextrin-Mediated Protection and Delivery of Esculetin: A Combined DFT, TD-DFT, and Docking Investigation, *Journal of Molecular Liquids*, 454, 129552 (2026). <https://doi.org/10.1016/j.molliq.2026.129552>
12. A. R. Guerroudj, S. Chetoui, M. Saidj, R. Rahmani, N. E. H. Belkafouf, N. Boubegra, M. Damou, A. Chouaih, Effect of fluorine position on the structural, electronic, and docking properties of conjugated hydrazone and diazenium naphthalenone derivatives: experimental and computational insights, *Spectroscopy letters*, (2026). <https://doi.org/10.1080/00387010.2026.2650370>
13. T. Ouis, N. Boubegra, M. Saidj, N. E. H. Belkafouf, A. Chouaih, S. Saidi-Besbes, K. Khezami, M. Durmuş, DFT investigation of electronic structure, optical and photovoltaic properties of 1, 2, 3-triazole functionalized phthalocyanine derivatives, *Polyhedron*, 292, 118097, (2026). <https://doi.org/10.1016/j.poly.2026.118097>
14. S. K. Gandhi, R. P. Gangadharan, A. R. Guerroudj, N. Boukabcha, A. Chouaih, Crystal growth, structural scrutiny, optical properties, Hirshfeld surface examination and DFT calculations of an organic NLO material -2,4,6-trinitrophenyl benzoate, *Next Materials*, 11, 101820, (2026). <https://doi.org/10.1016/j.nxmte.2026.101820>
15. S. Arabi, K. Dermeche, R. Rahmani, Y. Makhlof, S. Gheraibia, A. Chouaih, Ethnobotanical documentation and pharmacological potential of medicinal plants in Relizane, Algeria, *Bangladesh Journal of Botany* 55 (1), 77–84 (2026). <https://doi.org/10.3329/bjb.v55i1.88601>
16. K. Hammou, M. Azayez, M. C. Terkhi, N. Boukabcha, Y. Megrouss, A. Chouaih, Z. D. Benyahlou, M. H. M. Belhachemi, Computational and Crystallographic Insights into 4,4'-Dibromo-2,5-dimethoxy-[1,1'-biphenyl]-2,5'-dione: DFT, Hirshfeld Surface, and Molecular Docking Studies, *Doklady Chemistry (Dokl Chem)*, 520, 210–221 (2026). <https://doi.org/10.1134/S0012500825600464>
17. S. Chetoui, M. Azayez, O. Brihi, D. Hadji, Z. D. Benyahlou, Y. Megrouss, A. Chouaih, M. Drissi, J.-P. Djukic, S. Yahiaoui, Design, synthesis, X-ray structure, Hirshfeld surface, and NLO behavior of 3-bromo-2-[(2E)-2-(2-oxonaphthalen-1(2H)-ylidene)hydrazinyl]benzoic acid, *Acta Chim. Slov.*, 73(1), 140–153 (2026). <https://doi.org/10.17344/acsi.2025.9398>
18. M. Benabdallah, S. Djabbour, N. Boukabcha, N. Choukchou-Braham, A. Chouaih, Synthesis, Crystal Structure, Electronic Properties, and Molecular Docking Study of bis [5-Imino-7-phenyl-5H-thiazolo [3, 2-a] pyrimidine-6-carbonitrile], *Journal of Molecular Structure*, 1353 (2), 144721, (2026). <https://doi.org/10.1016/j.molstruc.2025.144721>

19. M. Karadag-Alpaslan, A. Benmohammed, E. Berrin Poyraz, A. Chouaih, N. Dege, R. Rahmani, Y. Megrouss, A. Djafri, Crystallographic, Hirshfeld Surface, and DFT Analyses of a Fluorine–Bromine Schiff Base: Insights into Structural Features and MAO-A Binding Potential, *Journal of Molecular Structure*, 1351 (1), 144218, (2026). <https://doi.org/10.1016/j.molstruc.2025.144218>
20. F. Baghdad Benabed, S. Attouti, M. Termoul, N. Douara, M. İmamoğlu, A. Çoruh, B. Bestani, N. Benderdouche, A. Chouaih, Removal of paraChlorophenoxyacetic acid and Linuron herbicides using pine cone-based activated carbon, *Journal of Dispersion Science and Technology*, 47(2), 191-203 (2026)
21. K. Dermeche, K. Errouane, Z. D. Benyahlou, S. Gheraibia, A. Chouaih, In Vitro Evaluation of Antioxidant and Anti-inflammatory Activities of *Aristolochia clematitis* L roots supported by Computational Investigation, *Journal of Molecular Structure*, 1349 (3), 143892, (2026). <https://doi.org/10.1016/j.molstruc.2025.143892>
22. A. Lahouali Dit Yahyaoui, M. H. M. Belhachemi, A. Ould Rabah, K. Hammou, L. Bensassi, A. Chouaih, M. Saidj, Ö. Tamer, D. Avcı, Y. Atalay, DFT-based investigation of structural, optoelectronic and molecular docking analysis of thiosemicarbazone derivatives, *Next Materials*, 10, 101391, (2026). <https://doi.org/10.1016/j.nxmte.2025.101391>
23. M. Azayez, Y. Megrouss, S. Yahiaoui, R. Rahmani, S. A. Kaas, Z. D. Benyahlou, N. Boukabcha, Y. Bouhadda, A. Chouaih, Spectroscopic analysis, chemical reactivity, and nonlinear optical properties of (Z)-3-N-(methyl)-2-N'-(4-methoxyphenylimino) Thiazolidin-4-one: DFT/TD-DFT approach, *Turkish Computational and Theoretical Chemistry*, 10 (2), 40-53 (2026). <https://doi.org/10.33435/tcandtc.1055649>
24. S. Attouti, M. Termoul, Z. Bahnes, F. Baghdad-Benabed, N. Boukabcha, B. Bestani, N. Benderdouche, A. Chouaih, J. Srénscek-Nazzal, B. Michalkiewicz, Reduction of 2,4-dichlorophenoxy acetic acid herbicide toxicity from aqueous media by adsorption: Experimental and theoretical study using DFT method, *Journal of Dispersion Science and Technology*, 47(2), 179-190, (2026). <https://doi.org/10.1080/01932691.2024.2414276>
25. M. Azayez, N. Khelloul, S. A. Kaas, S. Yahiaoui, M. Drissi, N. Benhalima, Y. Megrouss, A. Chouaih, S. Chetoui, Quantum chemical investigation, reactivity, NBO, docking-based exploration and in silico pharmacological properties of 3-bromo-2-[(2Z)-2-(2-oxonaphthalen-1(2H)-ylidene)hydrazinyl]benzoic acid, *Doklady Chemistry*, (2025).
26. H. Belbah, K. Belguidoum, Z. Ourdjini, F. Z. Hamamdia, F. Madi, L. Nouar, M. Nacef, M. H. M. Belhachemi, H. Amira-Guebailia, A. Chouaih, Enhancing the antioxidant potential of a coumarin derivative via nickel complexation: synthesis, spectral insights, DFT analysis, and molecular docking, *RSC Advances*, 15(37), 30102-30122 (2025). <https://doi.org/10.1039/D5RA03168K>
27. K. Hammou, A. Djafri, M. C. Terkhi, R. Rahmani, M. Goudjil, N. Boukabcha, E. Lunedei, N. Dege, A. Chouaih, A. Djafri, F. Abdelmalek, Design, Integrated Structural, and Theoretical Investigation of a Novel 4-Fluoro-thiazolidin-4-one Derivative Targeting Sirtuin-1, *ChemistrySelect* 10 (26), e01210 (2025). <https://doi.org/10.1002/slct.202501210>
28. S. K. Gandhi, N. Boukabcha, M.H.M. Belhachemi, Z.D. Benyahlou, A. Chouaih, Mixed solvent crystal development, structural, spectral, theoretical insights, linear, and non-linear optical qualities of N, N'-diphenylguanidinium phthalate, *Journal of Materials Science: Materials in Electronics* 36 (17), 1040 (2025). <https://doi.org/10.1007/s10854-025-15130-1>
29. N. E. H. Belkafouf, M. Saidj, R. Rahmani, N. Boubegra, A. R. Guerroudj, A. Chouaih, Structural and physicochemical properties of azo based materials for organic solar cell application: A DFT approach, *Journal of Photochemistry & Photobiology, A: Chemistry*, 468, 116526 (2025). <https://doi.org/10.1016/j.jphotochem.2025.116526>
30. S. Chetoui, N. Khelloul, N. Boukabcha, N. Benhalima, S. Smati, K. Drim, A. Chouaih, Synthesis, crystal structure, Hirshfeld surface analysis and experimental and theoretical study of new azo compound methyl 2-{2-[(E)-2-oxo-1,2-dihydronaphthalen-1-ylidene]hydrazin-1-yl}-benzoate, *Acta Cryst. C* 81 (2025). <https://doi.org/10.1107/S2053229625003523>
31. F. Allouche, N. Benyza, E. Lanez, A. Chouaih, T. Lanez, Electrochemical and UV-Visible Spectroscopic Investigation of Anthranilic Acid Interaction with DNA, *Journal of Electrochemical Science and Engineering*, 2738 (2025). <https://doi.org/10.5599/jese.2738>
32. A. Ould Rabah, A. Benmohammed, A. Chouaih, M. Goudjil, R. Rahmani, N. E. H. Belkafouf, M. H. M. Belhachemi, F. Z. Boudjenane, A. Djafri, N. Boukabcha, Synthesis, characterization, DFT investigation and in silico anti-eczema evaluation of a novel thiazolidinone derivative, *Acta Chim. Slov.*, 72, 247–260 (2025). <https://acsi-journal.eu/index.php/ACSi/article/view/9111>
33. M. A. Benaouda, A. Djafri, M. Azayez, Y. Megrouss, N. Boukabcha, K. Drim, A. Chouaih, N. Dege, Synthesis, Characterization, Hirshfeld Surface Analysis and DFT Calculation of (2Z,5Z)-3-(2-Methoxyphenyl)-2-[(2-methoxyphenyl)imino]-5-(3-nitrobenzylidene)-1,3-thiazolidin-4-one, *Russian Journal of Physical Chemistry A*, 99(4) 773–785 (2025). <https://doi.org/10.1134/S0036024425700384>

34. M. Azayez, C. Tabti, Y. Megrouss, F. Z. Boudjenane, S. A. Kaas, K. Drim, M. A. Benaouda, A. Chouaih, Reactivity Study, NCI-RDG Analysis, Molecular Docking and ADMET Investigation of N-(4-Acetyl-5-(4-(nitro)phenyl)-4,5-dihydro-1,3,4-thiadiazol-2-yl)-N-phenyl Acetamide, *Doklady Physical Chemistry (Dokl Phys Chem)* 515, 25–35 (2025). <https://doi.org/10.1134/S001250162460027X>
35. S. Djabbour, O. Besseboua, A. Benmohammed, N. Boukabcha, M. Goudjil, Y. Megrouss, M. Shahidul Islam, A. Chouaih, Theoretical Investigation, Spectroscopic Characterization, Global Chemical Reactivity, Nonlinear optical properties, and Antioxidant Activity of 2-(2, 4-Dimethoxybenzylidene)-hydrazono-1, 2-diphenylethanone, *Journal of Molecular Structure*, 1334, 141792, (2025). <https://doi.org/10.1016/j.molstruc.2025.141792>
36. S. Goumri-Said, R. Rahmani, A. Chouaih, M. Benali Kanoun, Probing DCV5T-Me for Organic Photovoltaics: A Comprehensive DFT and NEGF Study, *Chemical Physics Impact*, 10, 100842, (2025). <https://doi.org/10.1016/j.chphi.2025.100842>
37. M. Kadiri, A. Benmohammed, A. Cherif, F. Z. Boudjenane, N. Rekiba, O. Khoumeri, T. Terme, P. Vanelle, A. Djafri, A. Chouaih, Experimental and theoretical investigation of indole analogs as potential antibacterial agents: Design, synthesis, characterization, in-vitro bioevaluation, molecular docking and ADMET studies, *Journal of Molecular Structure*, 1330, 141514, (2025). <https://doi.org/10.1016/j.molstruc.2025.141514>
38. A. Boughoual, F. Monti, A. Guerraoui, N. Boukabcha, A. Chouaih, O. Naili, M. Goudjil, Comprehensive in-vitro antibacterial and in-silico anti-viral evaluations of selected fluorinated-quinolone ligands and their Ag/Zn-based coordination polymers, *Journal of Molecular Structure*, 141280, (2025). <https://doi.org/10.1016/j.molstruc.2024.141280>
39. L. Bensassi, F. Triki-Baara, Y. Megrouss, K. Drim, A. Chouaih, M. Saidj, N. E. H. Belkafouf, A. Benmohammed, A. Djafri, A. Hatzidimitriou, Synthesis, characterization, NCI-RDG, Hirshfield surface analysis, chemical reactivity and quantum chemical calculations of Z-3-N-ethyl-2-N-[(2-methoxyphenyl) imino] thiazolidin-4-one, *Journal of Molecular Structure*, 141301, (2025). <https://doi.org/10.1016/j.molstruc.2024.141301>
40. N. Benharkat, F. Triki-Baara, A. Chouaih, Ş. Atalay, M. Aygün, N. E. H. Belkafouf, N. Dege, M. H. M. Belhachemi, A. Djafri, N. Boukabcha, Synthesis, structure, DFT investigation, and in silico anticancer activity of N-(4-methoxyphenyl)-N'-methyl thiourea, *ChemistrySelect*, 10(1), e202404732 (2025). <https://doi.org/10.1002/slct.202404732>
41. K. Drim, H. Khaldi, Y. Megrouss, M. Azayez, N. Boukabcha, S. A. Kaas, M. A. Benaouda, M. Drissi, A. Chouaih, A. Djafri, Investigation of a New Benzo Imidazothiazole Derivative and Their Inhibition Activity Against Myeloid Leukemia 1 (Mcl-1): Synthesis, Single-Crystal X-Ray Structure, In Silico Study, and Intermolecular Interaction Assessments Using the DFT Method, *Journal of Molecular Structure*, 141206, (2025). <https://doi.org/10.1016/j.molstruc.2024.141206>
42. Y. Megrouss, S. Chetioui, F. C. Kaouche, S. Yahiaoui, K. Drim, Z. D. Benyahlou, M. Azayez, S. A. Kaas, M. Drissi, A. Chouaih, Theoretical investigations, Molecular Docking, ADMET analysis, Molecular Dynamic Simulation, and Drug-Likeness Scoring of (E)-1-[2-(3,4-Dimethylphenyl) Diazen-2-yl]-Naphthalen-2-Olate as a Corticosteroid Side-Chain-Isomerase Inhibitor, *Turkish Comp Theo Chem (TC&TC)*, 9(3), 57-78 (2025). <https://doi.org/10.33435/tcandtc.1530717>
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45. F. Z. Boudjenane, R. Rahmani, Y. Megrouss, A. Chouaih, N. Benhalima, DFT theoretical calculations on (Z)-2-hydroxy-N'-(4-oxo-1,3-thiazolidin-2-ylidene) benzohydrazide as a methylene tetrahydrofolatereductase inhibitor: An in silico study, molecular docking, and molecular dynamics simulations, *Turkish Comp Theo Chem (TC&TC)*, 9(1), 90-114 (2025). <https://doi.org/10.33435/tcandtc.1493008>
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47. M. Mostefai, A. Benmohammed, N. Benhalima, N. Dege, R. Rahmani, O. Kourat, A. R. Guerroudj, A. Chouaih, A. Djafri, Synthesis, structural analysis, and molecular docking of a novel 1,3,4-thiadiazole derivative: An experimental and molecular modeling studies, *Journal of Molecular Structure*, 139308 (2025).

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49. A. Dahmane, A. Driouch, A. Chouaih, H. Aguedal, S. A. Ziat, Development of a starch-based biocomposite reinforced by natural fibers extracted from sawdust: biodegradability study, *Pakistan Journal of Analytical and Environmental Chemistry*, 25(2), 214 – 231 (2024). <https://doi.org/10.21743/pjaec/2024.12.04>
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110. R. Rahmani, A. Djafri, A. Chouaih, A. Djafri, F. Hamzaoui, R. Rizzi, A. Altomare, Synthesis, molecular and solid state structure of 5-(5-nitro furan-2-ylmethylene), 3-N-(2-methoxy phenyl), 2-N'-(2-methoxyphenyl) imino thiazolidin-4-one: X-ray powder diffraction and DFT studies, *Journal of Molecular Structure*, 1143, 259-264 (2017).
111. A. Djafri, A. Chouaih, J.-C. Daran, A. Djafri, F. Hamzaoui, Crystal and molecular structure of (2Z, 5Z)-5-(4-nitrobenzylidene)-3-(2-methoxy phenyl)-2-[(2-methoxy phenyl) imino] thiazolidin-4-one, *Acta Cryst. E73*, 511-514, (2017).
112. S. Altürk, N. Boukabcha, N. Benhalima, Ömer Tamer, A. Chouaih, Davut Avci, Yusuf Atalay, Fodil Hamzaoui, Conformational, spectroscopic and nonlinear optical investigations on 1-(4-chlorophenyl)-3-(4-chlorophenyl)-2-propen-1-one: a DFT study, *Indian Journal of Physics*, 1, 1-11, (2017).
113. R. I. Bahoussi, A. Djafri, A. Chouaih, A. Djafri, F. Hamzaoui, Crystal structure and Hirshfeld surface analysis of ethyl 2-[[4-ethyl-5-(quinolin-8-yloxy)methyl]-4H-1,2,4-triazol-3-yl]sulfanyl}acetate, *Acta Cryst. E73*, 173-176, (2017).
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116. N. Benhalima, N. Boukabcha, Ö. Tamer, A. Chouaih, D. Avci, Y. Atalay, F. Hamzaoui, Solvent Effects on Molecular Structure, Vibrational Frequencies, and NLO Properties of N-(2,3-Dichlorophenyl)-2-Nitrobenzene-Sulfonamide: A Density Functional Theory Study, *Brazilian Journal of Physics*, pp 1-13, (2016).
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118. N. Boukabcha, N. Benhalima, R. Rahmani, A. Chouaih, F. Hamzaoui, Theoretical investigation of electrostatic potential and non linear optical properties of m-nitroacetanilide, *Rasayan Journal of Chemistry*, Vol. 8, N°4, 509-516 (2015).
119. M. Boulakoud, K. Toubal, S. Yahiaoui, G. Chita, A. Chouaih, A. Djafri, F. Hamzaoui, Molecular structure investigation of z-3n(2-ethoxyphenyl)-2-n'(2-ethoxyphenyl)-imino-thiazolidin-4-one by ab initio, DFT and X-ray diffraction methods, *Journal of Structural Chemistry*, Vol. 56, No. 7, 1373-1378 (2015).
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130. Fodil Hamzaoui, Charef Tabti, Abdelkader Chouaih, Gérard Vergoten, Evolution structurale en fonction de la température du composé LiNbO₃, *European Journal of Control*, 31(4):431-438, (2006). DOI:10.3166/acsm.31.431-438
131. Abdelkader Chouaih, Fodil Hamzaoui, Gérard Vergoten, Capability of X-ray diffraction to the determination of the macroscopic linear susceptibility in a crystalline environment: The case of 3-Methyl 4-Nitropyridine N-oxide (POM), *Journal of Molecular Structure*, 738(1):33-38, (2005). DOI:10.1016/j.molstruc.2004.10.067

List of national and international conference communications

1. A. Chouaih, Unveiling the therapeutic potential of Berbamine from *Berberis vulgaris*: An in silico exploration of nicotinic receptor activation, 1er Séminaire International Scientifique Tuniso-Algérien - Valorisation des Ressources Naturelles et Bio-surveillance SISTA1-VRNB, 20-22 décembre 2023, Monastir, Tunisie.
2. A. Chouaih, Détermination des structures des matériaux par diffraction des rayons X, International Workshop on Applied Chemistry, 12-14 décembre 2018, Chlef, Algérie.
3. N. Boukabcha, Y. Megrouss, M. Drissi, S. Yahiaoui, A. Chouaih, F. Hamzaoui, X-ray diffraction and ab initio investigations of the electrostatic potential and NLO properties of new organic compounds, International Workshop on Applied Chemistry, 12-14 décembre 2018, Chlef, Algérie.
4. Y. Megrouss, N. Boukabcha, S. Yahiaoui, A. Djafri, A. Nekrouf, A. Chouaih, M. Drissi, Synthesis and characterization of a thiazole derivative compound, International Workshop on Applied Chemistry, 12-14 décembre 2018, Chlef, Algérie.
5. N. Belkafouf, K. Toubal, N. Boukabcha, Y. Megrouss, A. Chouaih, F. Hamzaoui, Propriétés structurales, optiques et électroniques d'un nouveau matériau organique, International Workshop on Applied Chemistry, 12-14 décembre 2018, Chlef, Algérie.
6. A. Djafri, N. Khelloul, N. Boukabcha, O. Talhi, N. Taibi, A. Djafri, A. Chouaih, Synthèse, analyse vibrationnelle et propriétés structurales d'un nouveau composé organique, International Workshop on Applied Chemistry, 12-14 décembre 2018, Chlef, Algérie.
7. A. Djafri, N. Khelloul, N. Boukabcha, Y. Megrouss, A. Djafri, A. Chouaih, Synthèse, étude structurale et propriétés physico-chimiques associées du composé 5-Arylidène Imino Thiazolidinones, 4ème journées internationales de chimie organique JICOA-18, 1-3 décembre 2018, Annaba, Algérie.
8. N. Khelloul, A. Djafri, A. Chouaih, F. Hamzaoui, Crystal structure, Hirshfeld surface analysis and DFT calculations of organic compound, 4ème journées internationales de chimie organique JICOA-18, 1-3 décembre 2018, Annaba, Algérie.
9. N. Khelloul, N. Benhalima, A. Chouaih, F. Hamzaoui, Spectroscopic studies, HOMO-LUMO and NBO calculations, Premier colloque maghrébin sur la chimie des hétérocycles CMCH 1-2017, 16-17 mai 2017, Tunis, Tunisie.

10. N. Belkafouf, A. Chouaih, F. Hamzaoui, Détermination de propriétés structurales d'un composé organique : étude DFT, 12ème journées de chimie théorique et computationnelle UMMTO, 28-30 mars 2017, Tizi Ouzou, Algérie.
11. N. Boukabcha, S. Yahiaoui, Y. Megrouss, A. Chouaih, F. Hamzaoui, Theoretical investigations and electron density study of Aniline compound, International conference on progress in applied science ICPAS'17, 4-6 janvier 2017, Turquie.
12. S. Yahiaoui, N. Boukabcha, Y. Megrouss, A. Chouaih, F. Hamzaoui, X-ray diffraction and Theoretical investigations of new merocyanines dyes, International conference on progress in applied science ICPAS'17, 4-6 janvier 2017, Turquie.
13. A. Djafri, N. Boukabcha, N. Benhalima, A. Djafri, A. Chouaih, Synthèse, Caractérisation et Etude Structurale de 5-Arylidine-2-Imino-4-Thiazolidines, Premières Journées Internationales de Chimie Hétérocyclique et ses Applications JICHA 1-2016, 1-2 juin 2016, Tunis, Tunisie.
14. R. Bahoussi, H. Benaissi, A. Chouaih, N. Benhalima, Analyse structurale et calcul théorique des propriétés photovoltaïques d'un composé organique, Premières Journées Internationales de Chimie Hétérocyclique et ses Applications JICHA 1-2016, 1-2 juin 2016, Tunis, Tunisie.
15. R. Rahmani, A. Djafri, A. Chouaih, A. Djafri, F. Hamzaoui, Étude structurale et spectroscopique d'un composé hétérocyclique : approche théorique et expérimentale, Premières Journées Internationales de Chimie Hétérocyclique et ses Applications JICHA 1-2016, 1-2 juin 2016, Tunis, Tunisie.
16. H. Benaissi, S. Yahiaoui, R. Bahoussi, A. Chouaih, F. Hamzaoui, Étude théorique et expérimentale du transfert de charge intramoléculaire d'un composé organique C₂₁H₁₃N₃O₂, Premières Journées Internationales de Chimie Hétérocyclique et ses Applications JICHA 1-2016, 1-2 juin 2016, Tunis, Tunisie.
17. M. Boulakoud, A. Chouaih, F. Hamzaoui, Conformation and Molecular Interaction Studies of New Organic Compound, Congress of Theoretical Chemists of Latin Expression (CHITEL Meeting 2015), 26-31 juillet 2015, Turin, Italie.
18. A. Chouaih, N. Benhalima, R. Rahmani, N. Boukabcha, F. Hamzaoui, Electrostatic potential and Nonlinear Optical Properties of Zwitterionic compound: 6-methyl-2-oxo-3-(1-(ureidoiminio)ethyl)-2H-puran-4-monohydrate, 23rd Annual meeting of the German Crystallographic Society, 16-19 mars 2015, Göttingen, Allemagne.
19. R. Rahmani, A. Djafri, A. Chouaih, N. Benhalima, F. Hamzaoui, Molecular and solid-state structure of 5-(5-nitro furan-2-ylmethylene), 3-N-(2-methoxy phenyl), 2-N'-(2-methoxyphenyl) imino thiazolidin-4-one, 23rd Annual meeting of the German Crystallographic Society, 16-19 mars 2015, Göttingen, Allemagne.
20. Séminaire Matériaux 2014, novembre 2014, Montpellier, France.
21. Congrès de l'Union internationale de Cristallographie - IUCr2014, août 2014, Montréal, Canada.
22. International Conference on Environmental, Biological and Ecological Sciences, and Engineering (ICEBESE 2013), 27-28 février 2013, Barcelone, Espagne.
23. The 13th European Powder Diffraction Conference EPDIC 13, 28-31 octobre 2012, Grenoble, France.
24. Twenty-Second Congress and General Assembly of the International Union of Crystallography, 22-30 août 2011, Madrid, Espagne.
25. North African Conference on Computational Physics and Chemistry, 12-14 décembre 2010, Sidi Bel Abbès, Algérie.
26. Deuxièmes Journées Nationales du Génie des Procédés (2ème JNGP), 3-4 novembre 2010, Tlemcen, Algérie.
27. European Crystallographic Meeting (ECM26), 29 août - 2 septembre 2010, Darmstadt, Allemagne.
28. Première journée du Génie des procédés, 5 avril 2010, Mostaganem, Algérie.
29. 7ème Congrès de la SAC, 16-18 mai 2006, Oran, Algérie.
30. 7ème Journées de Chimie quantique, novembre 2005, Université Es-Senia, Oran, Algérie.
31. IXèmes Journées Maghrébines des Sciences des Matériaux, mai 2004, Université d'Oran, Algérie.
32. International Congress of Photovoltaic and Wind Energy, décembre 2003, Université de Tlemcen, Algérie.
33. Colloque de l'Association Française de Cristallographie, juillet 2003, Université de Caen, France.
34. 6ème journées d'études de chimie quantique, mai 2003, Université Mentouri Constantine, Algérie.
35. Congrès algérien de cristallographie 1, novembre 2002, USTHB, Alger, Algérie.

7. Doctoral Supervision

PhD theses defended — Supervisor

- 1. Benhalima Nadia** — *Modelling of the crystal structure of a new compound with nonlinear optical properties* (Defence: 09/04/2013)
- 2. Yahiaoui Salem** — *Structural and thermal analysis of compound C₁₂H₁₈ONFBr₂* (Defence: 07/05/2014)
- 3. Boubegra Naima** — *Study of charge distribution in an organic compound with nonlinear optical properties, Dimethyl amino cyano Biphenyl (DMACB)* (Defence: 29/05/2014)
- 4. Boulakoud Manel** — *Structural study of charge-transfer organic compounds: experimental approach and molecular modelling* (Defence: 05/06/2016)
- 5. Bahoussi Rawia Imane** — *Structural, vibrational and thermal study of a new organic compound, C₁₈H₂₀O₃N₄S* (Defence: 10/06/2017)
- 6. Khelloul Nawel** — *Structural and vibrational study of the thiazole compound C₁₈H₁₄O₂S₂NCI* (Defence: 02/07/2017)
- 7. Boukabcha Nourdine** — *Study of the structural properties of poly-substituted organic compounds* (Defence: 21/12/2017)
- 8. Megrouss Youcef** — *Determination of physical quantities of molecular compounds with nonlinear optical properties* (Defence: 21/12/2017)
- 9. Djafri Ahmed** — *Synthesis, structural study and associated physicochemical properties of some heterocyclic compounds* (Defence: 22/10/2018). Co-supervisor: Prof. Ayada Djafri.
- 10. Benaissi Hafida** — *Precise electron density analysis of an organic compound with nonlinear optical properties* (Defence: 02/05/2019). Co-supervisor: M. Drissi.
- 11. Belkafouf Nour El Houda** — *Structural and spectroscopic analysis of new functional materials* (Defence: 18/07/2019). Co-supervisor: Prof. Fodil Hamzaoui.
- 12. Kourat Oumria** — *Structural and conformational analyses of conjugated organic materials* (Defence: 07/01/2021). Co-supervisor: Dr. Nadia Benhalima.
- 13. Benelhadj Djelloul Yamina** — *Molecular structure of organic substances and its relation to biological activity* (Defence: 18/06/2021). Co-supervisor: Dr. Nourdine Boukabcha.
- 14. Nekrouf Asma** — *Combined X-ray diffraction and theoretical study of electron density distribution in molecular materials* (Defence: 09/03/2023). Co-supervisor: Dr. Y. Megrouss.
- 15. Boudjenane Fatima Zohra** — *Contribution to the development of new organic materials for optoelectronics: characterization, structure and associated properties* (Defence: 25/04/2024). Co-supervisor: Dr. Nourdine Boukabcha.
- 16. Kheddam Narimane** — *Synthesis, structure and biological activity of compound C₂₄H₁₅O₃N₃F₂S* (Defence: 08/04/2025). Co-supervisor: Dr. Ahmed Djafri.
- 17. Ould Rabah Amine** — *Structural and vibrational analysis and biological activity of certain thiazolidinone derivatives of pharmaceutical interest* (Defence: 09/07/2025). Co-supervisor: N. Boukabcha.
- 18. Bensassi Latifa** — *Structural study and biological activity of compound C₁₂H₁₄O₂N₂S* (Defence: 13/04/2026). Co-supervisor: M. Saidj.
- 19. Belhachemi Soumia** — *Spectroscopic and structural analysis, and physicochemical properties of new molecules of the thiazolidinone family* (Defence: 14/04/2026). Co-supervisor: C. Tabti.
- 20. Benharkat Noureddine** — *Design, structure and properties of hetero-atomic compounds of pharmaceutical interest* (Defence: 07/07/2026). Co-supervisor: N. Boukabcha — University of Chlef.

PhD theses defended — Co-supervisor

- 21. Guerroudj Ahlem Roufieda** — *Spectroscopic and structural analysis of new charge-transfer organic compounds* (Defence: 18/02/2023). Supervisor: N. Boukabcha.
- 22. Belhachemi Mohamed Hadj Mortada** — *Vibrational and structural study of new molecules for optoelectronics* (Defence: 02/05/2024). Supervisor: N. Boukabcha.
- 23. Benyahlou Zohra Douaa** — *Spectroscopic and structural analysis of thiazolidinone derivatives with nonlinear optical properties* (Defence: 04/05/2024). Supervisor: S. Yahiaoui.

24. Kaas Sid Ahmed — *Structure determination, and study of the properties and molecular reactivity of compound C₁₁H₁₂N₂O₂S, 2H₂O by X-ray diffraction and theoretical calculation* (Defence: 08/07/2025). Supervisor: Y. Megrouss.

25. Chebli Amar — *Crystallographic and spectroscopic analysis of a new compound with nonlinear optical properties from the quinoline family* (Defence: 22/01/2026). Supervisor: M. Drissi.

PhD theses in progress

26. Mostefai Mohammed — *Structure, characterization and electrochemistry of a new heterocyclic compound from thiadiazole derivatives: experimental study and molecular modelling* (Defence: Enrolled 2020). Co-supervisor: N. Benhalima.

27. Lahouali dit Yahyaoui Amina — *Structural and electrochemical study of a new charge-transfer heterocyclic compound* (Defence: Enrolled 2022). Co-supervisor: M. Saidj.

Magister (M.Phil.) theses defended

1. Bensenouci Said — *Application of the Rietveld method to the quantitative analysis of Portland Clinker* (Defence: December 2008)

2. Benelhadj Djelloul Yamina — *Structural analysis of a new organic compound from the thiazolidinone family* (Defence: 02/07/2010)

3. Benkadari Abdelkarim — *Resolution and refinement of the structure of a new pyrethroid* (Defence: 14/07/2010)

4. Boukabcha Noureddine — *Effect of substitution on the dipole moment of a compound with nonlinear optical properties: molecular modelling* (Defence: 16/06/2012)

5. Zahraoui Mehdi — *Comparative study by X-ray diffraction and molecular modelling of the structure of a reaction intermediate of an insecticide* (Defence: 16/06/2012)

6. Sahraoui Badreddine — *Charge density analysis of organic photovoltaic compounds, the case of tris(8-hydroxyquinolate) aluminium* (Defence: 25/05/2013)

Master's theses defended

More than twenty (20) Master's theses defended.

8. Scientific Book

1. F. Hamzaoui, A. Chouaih, *Electron Charge Density in Organic Compounds: Non-Linear Optical Properties*, Lap Lambert Academic Publishing, ISBN: 9783659710339 (2015).
2. M. Zahraoui, K. Dahmani, A. Chouaih, *Comparative Study by X-ray Diffraction and Molecular Modelling: XRD and Molecular Modelling of the Structure of a Reaction Intermediate of an Insecticide RU 67273*, Editions Universitaires Européennes (2019).

9. Scientific Activities

- ATRST expert for scientific assessments of research laboratories
- ATRST expert, PNR 2023 and 2025
- Expert member of the sub-commission for university habilitation in process engineering and environment (since November 2021)
- Chair of the CSD (Department Scientific Committee), Department of Process Engineering (2022 – 2025)
- Member of the scientific committee of the 1st national seminar on process engineering, 18–19 October 2021, Ouargla
- Member of the scientific committee of the 1st national conference on synthesis and catalysis, 26 October 2021, Tiaret
- Member of the scientific committee of the Process Engineering Day, 2 June 2021, Mostaganem
- Head of the doctoral training program: Technology, Structure and Properties of Solids
- Head of the Crystallography team – Laboratory of Technology and Solid Properties (LTPS)
- Member of the sub-commission for program design of the CPND, Materials Process Engineering speciality

- Member of the Scientific Council of the Faculty of Science and Technology
- Member of the scientific committee of the Process Engineering Department
- Chair of the CPC – Master's in Materials Process Engineering
- Reviewer, Journal of Molecular Structure – Elsevier/ScienceDirect
- Reviewer, Polycyclic Aromatic Compounds Journal
- Reviewer, Acta Chimica Slovenica
- Reviewer, Chemical Physics Impact – Elsevier/ScienceDirect
- Reviewer, Crystal Research & Technology
- Reviewer, Journal of Molecular Liquids
- Reviewer, Organometallic Applied Chemistry
- Reviewer, Arabian Journal of Chemistry
- Reviewer, Journal of Photochemistry and Photobiology A: Chemistry – Elsevier/ScienceDirect
- Reviewer, Phosphorus, Sulfur, and Silicon and The Related Elements
- Member of more than 40 PhD defence juries, as chair or examiner

10. Skills

- Interpersonal skills
- Communication
- Adaptability
- Versatility
- Logical thinking
- Rigour
- Autonomy

11. Interests

- Scientific research
- Reading
- Volunteering
- Travel