Short Curriculum vitae

Pr. Abdelaziz LAGHZIZIL
Faculty of Science, University of Mohammed V Rabat
Date de naissance 01/01/1966 Tissa-Taounate –Maroc
Email : a.laghzizil@um5r.ac.ma
Tél: 0667303157
CIN : C 253 478

Abdelaziz LAGHZIZIL is a University Professor (PES C since 2014) at the Faculty of Science of the University Mohammed V Rabat. He was recruited in 1996 at the Faculty of Sciences of Rabat. He worked in the research field "Material Science chemistry" at the same University in collaboration with teams from the University of Paris VI and the Ecole Polytechnique of Paris (France) and Queen's University (Canada) and has been or is currently responsible of different projects bi-or multi-lateral involving public or institutional partners.

This work focuses on the controlled synthesis and design of nanomaterials dedicated to environment applications and electrical properties. Thus, two major research themes are developed. The first concerns the synthesis of nanomaterials, their functionalization, and the development of specific architectures. The second deals the development, characterization, and optimization of adsorbents and photocatalysts for water treatment. The objectives in this approach are the development, characterization and optimization of photocatalysts for increased efficiency under UV-A, visible and solar illumination. As such, we will further extend the study of standard semiconductors to semiconductors and new generation composite derived phosphate nanomaterials. The second axis concerns Applications for Environment and Security. The treatment aspect of air, water, and surfaces are the specificities of the team with the elimination of VOCs, standard organic and more exotic organic targets. A new approach was initiated by the study of the elimination of plant protection products or endocrine disruptors and nanoplastics considered as emerging pollutants in wastewaters.

It is the author of more than **85 international publications** in the field of materials chemistry. His Scopus h-index is **25** (https://orcid.org/0000-0001-9608-0583). Abdelaziz LAGHZIZIL has taught undergraduate and graduate students. He has supervised several doctoral students in the fields of materials and environmental chemistry. He was invited as president and examiner for thesis defenses. Pr. LAGHZIZIL was participated in the evaluation of several CNRST and UMP6 international projects. He has served as a reviewer for several academic journals, many of which are top-ranked in their fields. He was a member of several commissions for the recruitment of assistant professors, whether in universities or in military establishments, in addition to being a member of commissions for the promotion of teacher-researchers.

Academic and scientific responsibilities

- Responsible for several modules (chemistry)
- Member of educational commissions
- Project’s evaluator at CNRST-Morocco [2014-2017 and 2020-2023] UM6P from 2022 (5-year contract).
- Evaluator of international projects “European Science Foundation, ESF-Science Connect Grant Evaluation Services.
- Director, evaluator and examiner of several theses
- Coordinator of national and international projects (CNRST, PICS, Toubkal)
- Coordinator of modules of License and Master (Chemistry)

- Supervised and defended theses
- Professor assistant Recruitment Commissions
- Expert and Evaluator of International CNRST and UM6P projects (2014-2017) and (2020-2023)
- Reviewer in Several Academic Journals
- Member of the Faculty Council and other Educational Committees**.**
- Organizer of some National and International Congresses.

-Recent papers **(From 2018 to 2023): Scopus EXPORT DATE:12 Dec 2023**

1. Labrag, J., Abbadi, M., Hnini, M., Bekkali, C.E., Bouziani, A., Robert, D., Aurag, J., **Laghzizil, A**., Nunzi, J.-M. Antibiotic photocatalysis and antimicrobial activity of low-cost multifunctional Fe_3O_4@HAp nanocomposites (2023) Journal of Environmental Health Science and Engineering, 21 (2), pp. 429-440. DOI: 10.1007/s40201-023-00869-8.
2. Abbadi, M., Abega, A.V., Dantio Nguela, C.B., **Laghzizil, A**., Robert, D. Enhanced Diclofenac Photomineralization under Solar Light Using $Ce_{1-x}Zn_xO_{2-x}$ Solid Solution Catalysts: Synergistic Effect of Photoexcited Electrons and Oxygen Vacancies (2023) Catalysts, 13 (8), art. no. 1181.DOI: 10.3390/catal13081181.
3. Robert, D., **Laghzizil, A.** Recent developments on advanced materials for photonics, sensing and energy conversion energy applications (AMPSECA'2021), (2023) Environmental Science and Pollution Research, 30 (34), pp. 81616-81618. DOI: 10.1007/s11356-023-27991-2.
4. Bouazzi, D., Mehri, A., Kaaroud, K., Touati, H., Karouia, F., Clacens, J.M., **Laghzizil, A.**, Badraoui, B. Beneficial effect of in-situ citrate-grafting of hydroxyapatite surface for water treatment (2023) Colloids and Surfaces A: Physicochemical and Engineering Aspects, 666, art. no. 131366, DOI: 10.1016/j.colsurfa.2023.131366.
5. Zari, R., Graich, A., Abdelouahdi, K., Monkade, M., **Laghzizil, A**., Nunzi, J.-M. Mechanical, Structural, and Environmental Properties of Building Cements from Valorized Sewage Sludges (2023) Smart Cities, 6 (3), pp. 1227-1238. DOI: 10.3390/smartcities6030059.
6. El Youssfi, M., Sifou, A., Ben Aakame, R., Mahnine, N., Arsalane, S., Halim, M., **Laghzizil, A.,** Zinedine, A.Trace elements in Foodstuffs from the Mediterranean Basin—Occurrence, Risk Assessment, Regulations, and Prevention strategies: A review, (2023) Biological Trace Element Research, 201 (5), pp. 2597-2626. DOI: 10.1007/s12011-022-03334-z.
7. Labrag, J., Abbadi, M., Oulguidoum, **A., Laghzizil**, A., Nunzi, J.-M., Sauvé, S. Magnetic Fe3O4-Hydroxyapatite materials as adsorbents for the removal of metals from water, (2023) Nanotechnology for Environmental Engineering, 8 (1), pp. 167-175. DOI: 10.1007/s41204-022-00292-8.
8. Benradi, F., Doughmi, A., Khamar, M., Cherkaoui, E., **Laghzizil, A**., Nounah, A.Biological treatment of leachate wastewater mixture (2023) International Journal of Advanced and Applied Sciences, 10 (2), pp. 23-29. DOI: 10.21833/ijaas.2023.02.004.
9. Zari, R., El Faroudi, L., El Hadrami, A., Monkade, M., Abdelouahdi, K., **Laghzizil, A**., Nunzi, J.-M., Brahmi, R.Development of a selective nanoporous Na-zeolite X from Moroccan coal fly ash for anionic dye adsorption and removal (2023) International Journal of Environmental Analytical Chemistry, DOI: 10.1080/03067319.2023.2239711.
10. Zari, R., Graich, A., Mghiouini, R., Monkade, M., El Hadrami, A., Brahmi, R., Abdelouahdi, K., **Laghzizil, A.** Treatment of tannery wastewater by infiltration/percolation process using natural clay combined solid wastes (2022) Desalination and Water Treatment, 277, pp. 244-250. DOI: 10.5004/dwt.2022.29015.

11. El Bekkali, C., Labrag, J., Oulguidoum, A., Chamkhi, I., **Laghzizil, A**., Nunzi, J.-M., Robert, D., Aurag, J. Porous ZnO/hydroxyapatite nanomaterials with effective photocatalytic and antibacterial activities for the degradation of antibiotics, (2022) Nanotechnology for Environmental Engineering, 7 (1), art. no. 1, DOI: 10.1007/s41204-021-00172-7.
12. Es-Saidi, I., Labrag, J., **Laghzizil, A**., Dânoun, K., Nunzi, J.-M., Zahouily, M. Na-doping approach for conductivity enhancement of natural phosphate derived fluorapatites, (2022) EPJ Applied Physics, 97, art. no. 58, . DOI: 10.1051/epjap/2022220156.
13. Hariti, N., EL Bekkali, C., Laasri, S., **Laghzizil, A**., Touhtouh, S., Belhora, F., Hajjaji, A. Advanced functional MgO-Essential oil hybrid materials, (2022) Materials Today: Proceedings, 66, pp. 1-4. DOI: 10.1016/j.matpr.2022.01.232.
14. Aouan, B., El Alouani, M., Alehyen, S., Fadil, M., Saufi, H., **Laghzizil, A**., Taibi, M., Nunzi, J.-M. Application of central composite design for optimisation of the development of metakaolin based geopolymer as adsorbent for water treatment, (2022) International Journal of Environmental Analytical Chemistry, DOI: 10.1080/03067319.2022.2070010.
15. Oulguidoum, A., Labrag, J., Abbadi, M., Essaidi, I., El Bekkali, C., **Laghzizil,** A.Synthesis and properties of Ag2S-Hydroxyapatite nanocomposite materials, (2022) Materials Today: Proceedings, 66, pp. 58-62. DOI: 10.1016/j.matpr.2022.03.149.
16. Bouyarmane, H., El Bekkali, C., Labrag, J., Es-saidi, I., Bouhnik, O., Abdelmoumen, H., **Laghzizil,** A., Nunzi, J.-M., Robert, D. Photocatalytic degradation of emerging antibiotic pollutants in waters by TiO2/Hydroxyapatite nanocomposite materials, (2021) Surfaces and Interfaces, 24, art. no. 101155, DOI: 10.1016/j.surfin.2021.101155.
17. Es-saddik, M., Laasri, S., Taha, M., **Laghzizil**, A., Guidara, A., Chaari, K., Bouaziz, J., Hajjaji, A., Nunzi, J.M. Effect of the surface chemistry on the stability and mechanical properties of the Zirconia-Hydroxyapatite bioceramic (2021) Surfaces and Interfaces, 23, art. no. 100980, DOI: 10.1016/j.surfin.2021.100980.
18. Es-Saddik, M., Laasri, S., **Laghzizil,** A., Nunzi, J.-M., Taha, M., Guidara, A., Hajjaji, A., Bouaziz, J. Mechanical strength characterization and modeling of hydroxyapatite/tricalcium phosphate biocomposite using the diametral-compression test, (2021) EPJ Applied Physics, 93 (3), art. no. 30403, . DOI: 10.1051/epjap/2021200368.
19. Oulguidoum, A., Bouiahya, K., Bouyarmane, H., Talbaoui, A., Nunzi, J.-M., **Laghzizil,** A. Mesoporous nanocrystalline sulfonated hydroxyapatites enhance heavy metal removal and antimicrobial activity (2021) Separation and Purification Technology, 255, art. no. 117777, DOI: 10.1016/j.seppur.2020.117777.
20. Es-Saddik, M., Laasri, S., **Laghzizil, A**., Guidara, A., Chaari, K., Bouaziz, J., Banouni, H., Hajjaji, A., Taha, M. The densification and diametral compression strength of Hydroxyapatite-Zirconia bioceramics: Experimental and modelling studies (2021) Materials Today: Proceedings, 52, pp. 71-77. DOI: 10.1016/j.matpr.2021.10.318.
21. Labrag, J., El Bekkali, C., Oulguidoum, A., Robert, D., **Laghzizil**, A., Nunzi, J.M. Porous and Bifunctional ZnO-Hydroxyapatite Nanostructure for Photocatalytic Degradation of Paracetamol and Methylene Blue in Water (2021) Iranian Journal of Catalysis, 11 (4), pp. 389-395.
22. Es-saidi, I., Labrag, J., **Laghzizil**, A., Nunzi, J.-M.Electrical and dielectric behaviors of thermally treated phosphate minerals (2021) Solid State Sciences, 111, art. no. 106440, . DOI: 10.1016/j.solidstatesciences.2020.106440.
23. Es-saidi, I., Oulguidoum, A., El Bekkali, C., Bouyarmane, H., **Laghzizil**, A., Nunzi, J.-M. Characterization and valorization of natural phosphate in removing of heavy

metals and toxic organic species from water, (2021) Journal of African Earth Sciences, 173, art. no. 104022, DOI: 10.1016/j.jafrearsci.2020.104022.
24. Alaoui-Belghiti, A., Tabbai, Y., Rkhis, M., Laasri, S., Lifi, H., **Laghzizil**, A., Strzałkowski, K., Hajjaji, A.Structural, thermal and dielectric properties of Pb(Mg1/3Nb2/3)1−x TixO3 ceramics at morphotropic phase boundary (2020) EPJ Applied Physics, 92 (1), art. no. 92, . DOI: 10.1051/epjap/2020200171.
25. Bouiahya, K., Oulguidoum, A., **Laghzizil**, A., Shalabi, M., Nunzi, J.M. Hydrophobic chemical surface functionalization of hydroxyapatite nanoparticles for naphthalene removal (2020) Colloids and Surfaces A: Physicochemical and Engineering Aspects, 595, art. no. 124706, DOI: 10.1016/j.colsurfa.2020.124706.
26. Mehri, A., Moussa, S.B., **Laghzizil**, A., Nunzi, J.-M., Badraoui, B. A new in situ enhancement of the hydroxyapatite surface by Tyramine: Preparation and interfacial properties, (2020) Colloids and Surfaces A: Physicochemical and Engineering Aspects, 592, art. no. 124590, DOI: 10.1016/j.colsurfa.2020.124590.
27. El Masaoudi, H., Benabdallah, I., Jaber, B., **Laghzizil**, A., Benaissa, M. 57217034739;57204034159;57194454089;6602908622;7005588706; Size control of Ag3PO4 nanoparticles using monoethanolamine and oleylamine chelating agents (2020) Journal of Nanostructures, 10 (2), pp. 362-374. DOI: 10.22052/JNS.2020.02.015.
28. Labrag, J., El Bekkali, C., Es-Saidi, I., Bouyarmane, H., **Laghzizil**, A., Khamar, M., Robert, D. A comparative study of the photocatalytic efficiency of metal oxide/hydroxyapatite nanocomposites in the degradation kinetic of ciprofloxacin in water, (2020) E3S Web of Conferences, 150, art. no. 02006, DOI: 10.1051/e3sconf/202015002006.
29. Bouiahya, K., Oulguidoum, A., **Laghzizil**, A. Alumina-hydroxyapatite nanocomposites and their applications for the removal of phenolic compounds from water: A comparative study (2020) E3S Web of Conferences, 150, art. no. 02008, DOI: 10.1051/e3sconf/202015002008.
30. Bouiahya, K., Es-saidi, I., El Bekkali, C., **Laghzizil**, A., Robert, D., Nunzi, J.M., Saoiabi, A. Synthesis and properties of alumina-hydroxyapatite composites from natural phosphate for phenol removal from water (2019) Colloids and Interface Science Communications, 31, art. no. 100188, . DOI: 10.1016/j.colcom.2019.100188.
31. Bouzit, S., Laasri, S., Taha, M., **Laghzizil**, A., Hajjaji, A., Merli, F., Buratti, C. 57204032206;36903647500;57721812700;6602908622;23392457600;57217139647;56186418900; Characterization of natural gypsum materials and their composites for building applications (2019) Applied Sciences (Switzerland), 9 (12), art. no. 2443, DOI: 10.3390/app9122443.
32. Oulguidoum, A., Bouyarmane, H., **Laghzizil**, A., Nunzi, J.-M., Saoiabi, A. Development of sulfonate-functionalized hydroxyapatite nanoparticles for cadmium removal from aqueous solutions (2019) Colloids and Interface Science Communications, 30, art. no. 100178, DOI: 10.1016/j.colcom.2019.100178.
33. Alaoui-Belghiti, A., Hajjaji, A., Laasri, S., Lifi, H., Strzałkowski, K., Płóciennik, P., Zawadzka, A., **Laghzizil**, A. , Investigation of thermal properties and energy harvesting of the Pb(Mg1/3Nb2/3)1-xTixO3 perovskite single crystals, (2019) Thermochimica Acta, 672, pp. 118-125. DOI: 10.1016/j.tca.2018.12.018.
34. Es-Saddik, M., Laasri, S., Taha, M., **Laghzizil**, A., Hajjaji, A., Hlil, E.K., Development and characterization of hydroxyapatite-alumina biocomposites for orthopedic implants, (2019) Key Engineering Materials, 820, pp. 97-103. DOI: 10.4028/www.scientific.net/KEM.820.97.
35. Bekkali, C.E., Bouyarmane, H., Karbane, M.E., Masse, S., Saoiabi, A., Coradin, T., **Laghzizil**, A. Zinc oxide-hydroxyapatite nanocomposite photocatalysts for the degradation of ciprofloxacin and ofloxacin antibiotics, (2018) Colloids and Surfaces

A: Physicochemical and Engineering Aspects, 539, pp. 364-370. DOI: 10.1016/j.colsurfa.2017.12.051.
36. El Bekkali, C., Bouyarmane, H., Laasri, S., **Laghzizil**, A., Saoiabi, A. Effects of metal oxide catalysts on the photodegradation of antibiotics effluent (2018) Iranian Journal of Catalysis, 8 (4), pp. 241-247.

Several oral and poster communications presented at national and international conferences.