

People's Democratic Republic of Algeria

Abbes Laghrou University - Khenchela

Faculty of Science and Technology

Department of Material Sciences

Thin Film Physics and Applications Laboratory - Biskra



Curriculum Vitae

Dr. LEKMINE Farid

(Doctor)

(Physics of Materials)



February 2024

Staff:

Name: LEKMINE

First name: Farid

Date and place of birth: 06/16/1975 in: Khenchela (Algeria)

Family situation: married (+ 03 children)

Personal address: New town 748 accommodations Khenchela, Algeria.

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Email: farid.lekmine@univ-khenchela.dz faridtec@gmail.com

Function: Teacher – researcher (2021)

Rank: Doctor (since 2021)

Diplomas & degrees

- Baccalaureate, June 1994, Natural Science, Honors: Good, Elbah mohamed Lakhder high school, Khenchela, Algeria.
- Physics License Diploma, June 1999, Physics, University of Batna, Algeria.
- Magister in Materials Physics, defended on May 30, 2012 at the University of Biskra, Mention: Very honorable. Theme: “Study of stress corrosion in pipelines”.
- State doctorate in Materials Physics, defended on June 23, 2021 at the University of Biskra, Mention: Very honorable with congratulations from the jury members. Theme: “Study of the inhibitory effectiveness of cyclic sulfur compounds in acidic environments on composite deposits produced electrolytically”.
- Teacher Assistant “A”: from 03/30/2015 to 12/20/2016

- Teacher Assistant “B”: from 12/16/2016 to 06/01/2022
- Lecturer “A”: from 01/06/2022

Training and Internships:

- 12/17/2016 – 12/31/2016: short-term internship (15 days), National Engineering School of Tunisia, Elmanar University
- 01/12/2018- 15/12/2018: short-term internship (15 days), National Engineering School of Tunisia, Elmanar University

Administrative and Scientific Responsibilities:

- Head of the Training Team in Materials Physics - Master - Abbas Laghrour University - Khenchela from May 31, 2021
- Member of the committee for evaluating the technical characteristics of laboratory teaching materials for the benefit of the physics laboratories of the Faculty of Science and Technology, according to the designation of the head of department in 2022
- Responsible for the common core discipline council in Science and Technology during the academic years from 2015 to date.
- Responsible for Mechanical TP and Electrical TP for the 1st Year common core License level for training: Sciences and Techniques, during the academic years 2015 to 2019.

Teachings:

- Corrosion of metals: (Course, TD, TP), 2nd Year master's degree in Materials Physics, Abbas Laghrour University, Khenchela.
- Fault properties: (Course, TD), 3rd Year License Physics of Materials, Abbas Laghrour University, Khenchela.

- **SEM-TEM:** Course, 2nd Year master's degree in Materials Physics, Abbes Laghrour University, Khenchela.
- Physics 1 (Course, TD TP), 1st Year common core Bachelor of Science and Technology, Abbes Laghrour University, Khenchela.
- Physics 2: (Course, TP, TD), 1st Year common core Bachelor of Science and Technology, Abbes Laghrour University, Khenchela.
- Waves and vibrations: (TD), 2nd year GM, GP, Physics of materials, Abbes Laghrour University, Khenchela.

Framing

Master's theses

1. HADFI Nadjat and BELGROUNE Ahlam, Corrosion resistance of Ni-P composite coatings in an aggressive environment, June 2016/2017.
2. KHOUNI Walida and BOUKECHACHE Abla, Characterization of Nickel-Phosphorus coatings, June 2016/2017.
3. BOUALI Houda and GHODBANE Nadja, The influence of heat treatment on the corrosion of Ni-P coatings, June 2017/2018.
4. MERABTI Rima and BOUKHADRA Romissa, Development and characterization of electrochemically deposited Nickel coatings, June 2018/2019.
5. AOUAIDJIA Chaima BOUTI Dounia, Influence of corrosion inhibitors on electrochemically deposited Ni-P coatings, June 2019/2020.
6. MEDJEKAL Amira, Mechanical characterizations and corrosion of Ni-P alloys, June 2020/2021.
7. BOUYAHIA Amira and MAHDAOUI Rima, Study of the corrosion resistance of Ni-P-TiO₂ coatings, June 2020/2021

8. TALLIA Rahila AMAMRI Souad, Study of the inhibitory effectiveness of a plant on steel corrosion in HCl medium, June 2021/2022.
9. Tobbi Amel and Mehyaoui Djahida, Study of steel corrosion in an H₃PO₄ environment, June 2021/2022.
10. Belfounasse Djouhra, Preparation and characterization of a nickel niobium-based coating, June 2022/2023
11. DJELAB Rachida, Development and characterization of the coating (Ni-P-Nb) 2023/2024 (in progress)

Doctoral theses:

01. BARKANI Mahfoud, Protection against corrosion of steels intended for the company SONITEX Khenchela, University of Khenchela (In progress)
02. ZOGHELAMI Hamza, Effectiveness of organic inhibitors in the protection against corrosion of industrial installations, University of Khenchela (In progress)

Research :

- Member of a research project (PRFU Project), Effect of welding on the microstructural and mechanical properties of some industrial steels, University of Biskra, 2020-2024, code: A16N01UN070120210003.
- Member of a research project (CNEPRU Project), Study of the corrosion of API5CT N80 concentrics in Albien water environment, University of Khenchela, 2018-2021 Code B00L02UN400120150003
- Research Project Manager (PRFU project): “Study of the corrosion problem of steels used in the company SONITEX Khenchela”, University of Khenchela, 2023-2026, Code: B00L02UN400120230001

Organization of Seminars:

- Member of the Scientific Committee, First international Conference on Materials Science and Applications, 08-09 February. 2023, Khenchela University, Algeria
- Reviewer, First international Conference on Materials Science and Applications, 08-09 February. 2023, Khenchela University, Algeria
- Session Chair, 1st National Conference on Materials Sciences and Technology (MatScience-2022) December 13-15, 2022.
- Session Chair, 1st National Conference on Materials Sciences and Engineering (MSE'22), June 28-29, 2022.
- Session Chair, First international Conference on Materials Science and Applications, 08-09 February. 2023, Khenchela University, Algeria
- Reviewer, 1st National Conference on Materials Sciences and Technology (MatScience-2022) December 13-15, 2022.
- Reviewer, 2nd National Conference on Materials Sciences and Engineering, (MSE'2023) December 12 and 13th, 2023, University Center of Maghnia, Algeria.

Publications :

1. **LEKMINE Farid**, BENTEMAM Hachemi, NAOUN M, HADJADJ M, “*Mechanical Characterization of Electrodeposition Ni-P alloy Coating*”. JOURNAL OF NANO- AND ELECTRONIC PHYSICS, 12 (1) (2020) 01001-01005. DOI: [10.21272/jnep.12\(1\).01001](https://doi.org/10.21272/jnep.12(1).01001)
2. **LEKMINE Farid**, Ben Temam Hachemi, Hadjadj Mohammed, “*Study the effect of Ni-P coating and 4, 5-dimethyl- 1, 2-dithiol-3-thione inhibitor on the corrosion of carbon steel*”. International Journal of Sciences and Research, **76** (2) (2020) 138-152 [doi: 10.21506/j.ponte.2020.2.12](https://doi.org/10.21506/j.ponte.2020.2.12)

3. **Farid LEKMINE**, M. Naoun, A. Gana, H. Ben Temam, **Structural, Mechanical and Corrosion Behavior of Ni-P-TiO₂ Composite Coatings: Effect of Current Density**, *JOURNAL OF NANO- AND ELECTRONIC PHYSICS*, Vol. **14**No 1, 01009(5pp) (2021), DOI: [10.21272/jnep.14\(1\).01009](https://doi.org/10.21272/jnep.14(1).01009)
4. **LEKMINE Farid**, BENTEMAM Hachemi, Guettaf Temam Elhachmi, "*Characterization of Nano- Crystalline NiP Alloy Coatings Electrodeposited at Various Current Densities*". Iranian Journal of Materials Science and Engineering, 18(3) (2021) 1-7. DOI: [10.22068/ijmse.2237](https://doi.org/10.22068/ijmse.2237)
5. **Farid Lekmine**, K. Digheche, M. Naoun, H. Bentemam, and A. Gana, Effects of Current Density on Ni-P Coating Obtained by Electrodeposition, *Metallophysics and Advanced Technologies*, 2021, vol. 43, No. 10, pp. 1351–1363, [https://doi.org/ 10.15407/ mfint. 43.10. 1351](https://doi.org/10.15407/mfint.43.10.1351)
6. A. Gana, H. Ben Temama, **LEKMINE Farid**, M. Naoun, O. Herzallah, "*Characterization of electrodeposited Ni–MoS₂ composite coatings under the influence of current density*", *Digest Journal of Nanomaterials and Biostructures*, 16 (3) (2021) 815-821
7. Abdelkader Saidi, Boubekour Azoui, Chaouki Ghenai, **Farid Lekmine**, *Design and Conception of Platform that Allows to Connect Different Solar Panels and Loads through a DC-DC Buck Converter*, *JOURNAL OF NANO- AND ELECTRONIC PHYSICS*, Vol. **14** No 6, 06004(6pp) (2022), DOI: [10.21272/jnep.14\(6\).06004](https://doi.org/10.21272/jnep.14(6).06004)
8. Ibtissem Zidani, **Farid Lekmine**, Darradji Bahloul, Abderrahmane Gana, *Effect of the Additive on the Properties of Ni-Fe Coating*, *JOURNAL OF NANO- AND ELECTRONIC PHYSICS*, Vol. **14** No 2, 02021(4pp) (2022), DOI: [10.21272/jnep.14\(2\).02021](https://doi.org/10.21272/jnep.14(2).02021).

9. **Farid. Lekmine**¹, I. Zidani, A. Chala, A. Gana, *Study of the Optimal Composition of the Bath on Nucleation and Growth of Ni-Fe Alloy Thin Films*, *JOURNAL OF NANO- AND ELECTRONIC PHYSICS*, Vol. **14** No 6, 06022(5pp) (2022).
10. **F. Lekmine**, I. Zidani, A. Chala, H. Ben Temam, Deposition Rate and Electrochemical Corrosion Behavior of Nickel-Based Composite Coatings, *JOURNAL OF NANO- AND ELECTRONIC PHYSICS*, Vol. 14 No 6, 06005(5pp) (2022).
11. Kelthoum.Digheche, **Farid lekmine**, Abdelouahed Chala, Farida khamouli, Microstructural characterisation after isothermal annealing of low carbon welded steel, *Algerian Journal of Engineering, Architecture and Urbanism*, Vol. 5 S.I. Nr. 5 (2021) P 1298-1304

Communications:

1. **Farid Lekmine**, Attestation dans le cadre de l'école de rayons X et ses application, Biskra, 10 au 12 Avril **2010**.
2. **LEKMINE Farid**, Hachemi Bentemam, CHALA A "*Etude de la corrosion sous contraintes dans les pipelines*". Deuxième Séminaire National Matériaux- Corrosion (SNMC2), Faculté des Sciences, Université 20 août 1955- Skikda, (27-28 Novembre 2013, Algérie.
3. **LEKMINE Farid**, Hachemi Bentemam, "*Résistance à la corrosion des revêtement composites Nickel-Phosphore dans un milieu agressif*", Colloque international sur les matériaux et leurs applications (CIMA 2017), Laboratoire d'ingénierie et sciences des matériaux Avancés (ISMA), Université de Abbes Laghrour Khenchela et Laboratoire Physico- Chimie des matériaux, Université Chadli Ben-Djedid EL-Taref, (29-31 Octobre 2017) Algérie.

4. GANA Abderrahmane, BENTEMAM Hachemi, **LEKMINE Farid**, « *protection de l'acier contre la corrosion par revêtement composite Ni-MoS₂*, Conférence Nationale Sur la chimie des matériaux, (02-03 Juillet 2019), Faculté des sciences, Université M'Hamed Bougara Boumerdes, Algerie.
5. **LEKMINE Farid**, Hachemi Bentemam, Abderrahmane Gana, ZIDANI Ibtissem, "*Anti Corrosion du Cuivre Par Revêtement Nickel - Phosphore*". Conférence Nationale Sur la chimie des matériaux, (02-03 Juillet 2019), Faculté des sciences, Université M'Hamed Bougara Boumerdes, Algerie.
6. GANA Abderrahmane, BENTEMAM Hachemi, **LEKMINE Farid**, *La morphologie et la structure de dépôt (Ni-MoS₂) réalisé par électrodéposition* » 1^{er} Congrès Maghrébin des Matériaux, Terres Rares, Applications (MTRA2019), (7-9 Avril 2019) Tunisie.
7. **LEKMINE Farid**, BENTEMAM Hachemi, Abderrahmane GANA, ZIDANI Ibtissem, "*Caractérisation structurelle et électrochimique du revêtement Ni-P électrodéposés* ". 1^{er} Congrès Maghrébin des Matériaux, Terres Rares, Applications (MTRA2019), (7-9 Avril 2019) Tunisie.
8. **LEKMINE Farid**, Abderrahmane Gana, Kelthoum Dighech, Hachemi Bentemam and Ibtissem Zidani, "*Synthesis and characterization of Ni-P-TiO₂ composites coatings fabricated by électrodeposition*". 1st International Conference on Sustainable Energy and Advanced Materials IC-SEAM, Ouargla, ALGERIA, Faculty of Mathematics and Matter Sciences, Université de Kasdi Merbah Ouargla, (21-22 April 2021) Algérie.
9. **LEKMINE Farid**, Abderrahmane Gana, Kelthoum Dighech, Hachemi Bentemam, "*The effect of current density on the corrosion behaviour of Ni-P- TiO₂ in acidic solution*". SÉMINAIRE INTERNATIONAL SUR LES SCIENCES DE LA MATIERE (PHYSIQUE ET CHIMIE), Algerian Journal of Engineering, Architecture and Urbanism, Siège social :

- A.N.E.A.U. Association, Université USTO, Bir El Djir, Oran, 31000, (17 - 18 Septembre 2021), Algerie.
10. Kelthoum Digheche, Farida khamouli ,**LEKMINE Farid**, Abdelouahed Chala " *Applying of heat treatments to ameliorate the microstructural properties of welded pipeline steel* ". SÉMINAIRE INTERNATIONAL SUR L'INDUSTRIE ET LA TECHNOLOGIE, Algerian Journal of Engineering, Architecture and Urbanism, (12 - 13 Mars 2021), Algeria.
 11. Kelthoum Digheche, Farida khamouli ,**LEKMINE Farid**, Abdelouahed Chala " *Microstructural characterisation of X70 heat treated welded pipeline steel* ". SÉMINAIRE INTERNATIONAL SUR LES SCIENCES DE LA MATIERE (PHYSIQUE ET CHIMIE), Algerian Journal of Engineering, Architecture and Urbanism, Siège social : A.N.E.A.U. Association, Université USTO, Bir El Djir, Oran, 31000, (17 - 18 Septembre 2021), Algerie.
 12. Abderrahmane Gana, **LEKMINE Farid**, Herzallah Ouahiba and Hachemi Bentemam, " *Mechanical Characterization of Electrodeposition of Ni–MoS₂ composite coating*". 1 st International Conference on Sustainable Energy and Advanced Materials IC-SEAM, Ouargla, ALGERIA, Faculty of Mathematics and Matter Sciences, Université de Kasdi Merbah Ouargla, (21-22 April 2021) Algérie.
 13. Abderrahmane Gana, **LEKMINE Farid**, Herzallah Ouahiba and Hachemi Bentemam, " *Synthesis composites coatings Ni-MoS₂ by electrodeposition*". 1 st International Conference on Sustainable Energy and Advanced Materials IC-SEAM, Ouargla, ALGERIA, Faculty of Mathematics and Matter Sciences, Université de Kasdi Merbah Ouargla, (21-22 April 2021) Algeria.
 14. **LEKMINE Farid**, GANA Abderahmane, BENTEMAM Hechemi, " *Preparation, characterization and corrosion of Ni-P-TiO₂*

- electrodeposited*” Journées Nationales des Sciences des Matériaux (JNSM2021), Université de Batna 2, 17-18 Novembre 2021.
15. GANA Abderahmane, **LEKMINE Farid**, HERZALLAH Ouahiba, BENTEMAM Hechemi, Microhardness and Corrosion Behavior of Ni-MoS₂ Electrodeposited Coatings, Journées Nationales des Sciences des Matériaux (JNSM2021), Université de Batna 2, 17-18 Novembre 2021.
 16. Kelthoum Digheche, **LEKMINE Farid** , Farida khamouli , Abdelouahed Chala, “Microstructural characterization of X70 heat treated welded pipeline steel”, 1st International visio conference on materials science and engineering ICMSE2021, Université de Khenchela, 17-18 Novembre 2021.
 17. **Farid Lekmine**, 1^{ères} journées nationals d’étude sur la chimie théorique et ses applications JCTA1-21, Université de Khenchela, 13-15 décembre 2021.
 18. **Farid Lekmine**, The international Workshop on Structural Resolution by single crystal and powder X-Ray Diffraction, 6-7 November 2022.
 19. Khouloud Moussaoui, **Farid Lekmine**, Kelthoum Digheche, Theoretical Study of the characterization of deposits on industrial steel made by an electrochemical process, 1st National Conference on Materials energy and environment, November 23-24 2022.
 20. **Farid Lekmine, Abdelouahad Chala**, 1st National Conference on Materials Sciences and Technology (MatScience-2022) Decembre 13-15, 2022.
 21. **Farid Lekmine** , I. Zidani, Kelthoum Digheche, “Effect of bath concentration on nucleation and growth of NI-Fe alloy thin films, 1st National Conference On Material, Energy, environment, November 23-24-2022 Biskra, Algeria.
 22. Kelthoum Digheche, **LEKMINE Farid** , Farida khamouli , Abdelouahed Chala, “Microstructural Characterization of X70 Welded Joint, Study Days on Materials: Synthesis and Energy Applications (SDMSEA -2022), November 9-10, 2022. Biskra University, Algeria.
 23. **Farid Lekmine**, 2023 الملتقى الدكتورالي السنوي لجامعة خنشلة 21-22 فيفري 2023

24. **Lekmine Farid**, Gana abderahmane, Zidani Ibtissem, Digheche Kalthoume, Hachemi Bentemam, Le potentiel optimal du bain de revêtement Ni-Fe, First International Conference on Material Science and Applications, February 08-09, 2023, Khenchela University, Algeria.
25. Gana Abderahmane, **Lekmine Farid**, Zidani Ibtissem, Herzallah ouahiba, Hachemi Bentemam, “Effect of Sodium dodecyl Sulfate on hardness and corrosion of Ni- MoS₂ composite coating, 1st International Seminar On chemical process and environment, 14-15 March,2023, Biskra University, Algeria.
26. Gana Abderahmane, **Lekmine Farid**, Herzallah ouahiba, Hachemi Bentemam, “Effect of MoS₂ content en Ni-Mos₂ composites coatings and corrosion protection of steel (BS2), First International Conference on Material Science and Applications, February 08-09, 2023, Khenchela University, Algeria.
27. Zidani Ibtissem, **Lekmine Farid**, A. Gana, Effect of Saccharine on the morphology of Ni-Fe coating, 1st Scientific Days on Materials and Their Applications, 2023, Biskra University, Algeria.
28. Zidani Ibtissem, **Lekmine Farid**, A. Gana, “ Deposition and Characterization of Ni-Fe Coatings, 1st International Conference on Physico-chemistry, Materials Sciences & Applied Mathematics, (ICPMSAM’13), 27-28, 2023, Skikda University.
29. **Farid Lekmine**, A. Gana, I. Zidani, O.Harzallah, Electrochemical and Thermodynamic Investigation of 3-Methylthio-5p. 1.2-Methoxyphenyl Dithylium as a Potential Corrosion Inhibitor for Ni-P Coatings in Hydrochloric Acid, 1st Scientific Days on Materials and Their Applications, **2023**, Biskra University, Algeria.