

# CURRICULUM VITAE (C.V)

**Dr. Abdunaser Hamza Ahmed Fadel**

**Academic Number 1-02-1-0000018364**

**Academic degree:** Professor at University of Tripoli, Faculty of Engineering. Department of Materials and Metallurgical Engineering, Tripoli - Libya

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**Date of birth:** March.02, 1964

**Place of birth:** Agelat, Libya

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**Field of Specialization:** Materials Science and Metallurgical Engineering.

**Research Activity:** Author in 27 Scientific Papers (76% of them as first author). Eight of these scientific papers are classified in Scopus as follows: Two of them as Q<sub>1</sub>, Two as Q<sub>2</sub>, Two as Q<sub>3</sub> and Two as Q<sub>4</sub> For more information, pls go to the link (<https://www.scopus.com/authid/detail.uri?authorId=35503355600>) where my page on Scopus is located.

## **Education:**

B. SC.: Sept., 1989, in Materials Science and Engineering / Department of Materials Science and Engineering / Faculty of Nuclear and Electronic Engineering / Tripoli University.

M. Sc.: Sept., 2003 , in Materials and Metallurgical Engineering / Department of Metallurgical Engineering / Faculty of Technology and Metallurgy (TMF) / Belgrade University Yugoslavia.

Ph.D.: May 2013. in Metallurgical Engineering / Department of Metallurgical Engineering / Faculty of Technology and Metallurgy (TMF) / Belgrade University.

## **Area of Interest**

Mechanics of Materials, Failure and Fracture Analysis of Engineering Materials, Metals and Alloys Investigation by Optical Microscopy (OM) and Scanning Electron Microscopy (SEM), Testing of Composite Materials, Determination of Crystal Structure of Metals and Alloys by X-Ray Diffraction, Materials Testing and Quality Control by Destructive Testing (DT) and Non Destructive Testing (NDT), Formability of Metals and Alloys, Physics of Strength and Plasticity of Materials, Phase Transformation and TTT Diagram Determination, Science and Mechanics of Biomaterials.



**Experience:**

March, 1990 – Dec., 1996, Researcher, in Department of Materials Technology/ Engineering Research Institute / Tripoli - Libya.

Dec., 1996 – Sep 2001, Head of Mechanical Testing Department in laboratories Research Central / Tripoli – Libya.

Sep. 2001 – Sep 2003 M. Sc. Student, in Materials and Metallurgical Engineering / Department of Metallurgical Engineering / Faculty of Technology and Metallurgy, Belgrade University Yugoslavia.

Sep. 2003 – Dec. 2006 Head of Metallography Inspection and Non-Destructive Testing (NDT) Department, in laboratories Research Central / Tripoli – Libya.

Dec., 2006 – July,2008 Lecturer Assistance at University of Zawiya, Faculty of Natural Resources, Al Zawiya Libya.

July,2008 – Sep 2013 PhD Student at University of Belgrade, Faculty of Technology and Metallurgy, Department of Metallurgical Engineering,

Sep, 2013 – 01 / 01 / 2015 Lecturer and Head of General Department and Chairman of Scientific Committee at Faculty of Natural Resources, University of Zawiya - Al Zawiya Libya

Jan.2015 – Oct. 2021 Dean Assistant for Scientific Affairs at Faculty of Natural Resources, University of Zawiya - Al Zawiya Libya

Oct. 2021 – Up to 23/5/2022 Dean of the Faculty of Natural Resources Engineering

May 2022 – October 2023 Faculty member at the Department of Materials and Minerals Engineering, Faculty of Oil, Gas and Renewable Energy Engineering, University of Zawiya.

October 2023 up to now faculty member at the Department of Materials and Metallurgical Engineering, Faculty of Engineering, University of Tripoli and is responsible for the duties of the Quality Coordinator.

**Practice Training Courses:**

► Training Course in Principles and Practice of Metallography – May,1997 - July 1997 - Vinca institute of nuclear sciences -Belgrade-Yugoslavia.

► Training Course in Analysis of Vibration Problems, March, 1999 - Faculty of Engineering - Tripoli University, Libya.

- ▶ Practice Training Course in X-Ray Diffraction and Application - Sept.,1990 - Tajora Industry Research Center-Tripoli, Libya.
- ▶ Practice Training Course in Testing of Engineering Materials, Include - Mechanical Testing, Metallography Inspection and Non-Destructive Testing (NDT) – March, 1994 - March, 1995 in Engineering Research Center-Tripoli –Libya.
- ▶ Principles and Practice Training Course in Scanning Electron Microscopy (SEM) - Dec., 2005 – Madrid, Spain.
- ▶ Practice Training Course in Roughness Measurements - Dec., 2005 – Madrid, Spain.

### **Research Activity Details:**

- 1. Abdunnaser Fadel**, D. Glišić, N. Radovic, Dj. Drobnjak, Influence of Cr, Mn and Mo Addition on Structure and Properties of V Microalloyed Medium Carbon Steels, Journal of Materials Science & Technology 28 (2012) 1053-1058.
- 2. Abdunnaser Fadel**, N.Radovic, D.Glišić, Dj.Drobnjak, Intragranular Ferrite Morphologies In Medium Carbon Vanadium-Microalloyed Steel, Journal of Mining and Metallurgy, Section B: Metallurgy. 49 (3) B (2013) 237 – 244.
- 3.** D. Glišić, N. Radovic, A. Koprivica, **Abdunnaser Fadel** and Dj. Drobnjak, Influence of Reheating Temperature and Vanadium Content on Transformation Behavior and Mechanical Properties of Medium Carbon Forging Steels ISIJ International, Vol. 50 (2010), No. 4, pp. 601–606.
- 4.** D. Glišić, **Abdunnaser Fadel**, N. Radović, Dj. Drobnjak, M.Zrilić, Deformation Behaviour of Two Continuously Cooled Vanadium Microalloyed Steels At Liquid Nitrogen Temperature, Hemijska Industrija, 67 (6) (2013) 981-988.
- 5. Abdunnaser Fadel**, N. Radovic, Dj. Drobnjak, Static Recrystallization in Nb/Ti Low Carbon Microalloyed Steel, 4<sup>th</sup> International Conference on Processing and Structure of Materials Conf.Proc., Eds: E.Romhanji, M.T.Jovanovic, N.Radovic, May 2010, Palic, 13-18 ISBN:86-87183-17-9.
- 6.** N. Radovic, A. Koprivica, D. Glišić, **Abdunnaser Fadel** and Dj. Drobnjak, Influence of V and N on Transformation Behavior and Mechanical Properties of Medium Carbon Forging Steels, Int. Conference on Thermomechanical Processing of Advanced Materials(THERMEC 2009), Eds. T.Chandra et al., August 2009, Berlin, Germany, Materials Science Forum Vols.638-642(2010) 3459-3464 ISBN:3-908454-91-3.

7. N. Radovic, A. Koprivica, D. Glišić, **Abdunnaser Fadel** and Dj. Drobnjak, *Metalurgija* 16(2010) ISSN:0354-6306.
8. **Abdunnaser Fadel**, N. Radovic, Dj. Drobnjak, Nucleation Stages of Isothermal Transformation In Medium Carbon V-Microalloyed Steels. First Metallurgical & Materials Engineering Congress of South - East Eurpe (MME SEE 2013), in Belgrade, Serbia, 23-25 May 2013.
9. **Abdunnaser Fadel**, Dragomir Glišić, Nenad Radović , Djordje Drobnjak, Isothermal Decomposition of Medium Carbon V Microalloyed Austenite in Lower Temperature Range : Microstruture and Properties VI th International Metallurgical Congress, Ohrid 2014
- 10- **Abdunnaser H. Fadel**, Dragomir Glišić, Nenad Radović , Djordje Drobnjak, Nucleation Stages of Isothermal Transformation in Ti and Ti Free Microalloyed Steels, *International Journal of Engineering and Information Technology (IJEIT)*, Vol. 2. No.1 2015. .
- 11-**Abdunnaser H. Fadel**, Determiation of Austenite Grain Size in Ti and Ti Free Microalloyed Steels, *International Journal of Engineering and Information Technology (IJEIT)*, Vol. 2. No.2 2016. 53.
- 12- **Abdunnaser H. Fadel**, Dragomir Glišić, Nenad Radović, Djordje Drobnjak, Some Aspects of Decomposition in Medium Carbon V Micralloyed Steels , VII International Metallurgical Congress, Ohrid 2016. P. 37.
- 13- **Abdunnaser H. Fadel**, Nenad Radović , Determiation of Activation Energy for Static Re-Crystallization in Nb-Ti Low Crbon Microalloyed Steel, *International Journal of Engineering and Information Technology (IJEIT)*, Vol.3. No.2 2017. 164.
- 14- **Abdunnaser H. Fadel**, Nenad Radović, Nucleation Stages Onset and Intra-granular Ferrite Morphologies in Titanium Free Microalloyed Steel, *International Journal of Engineering and Information Technology (IJEIT)*, Vol.3. No.2 2017. 170.
- 15-**Abdulnaser Hamza. Fadel**, Post Weld Heat Treatment Qualification of Type 304L Stainless Steel Weld Metal, *International Conference on Technical Sciences (ICST2019)*,4-6 March 2019. P. 1131.
- 16-**Abdulnaser Hamza Fadel**, Nenad Radović, Kamal F. Alhauwari, Acicular Ferrite Transformation by Isothermal Decomposition in Medium Carbon Vanadium Micro Alloyed Steel, *Al academia Journal for Basic and Applied Science*, Vol.1. No.2 2019.

- 17-** Dragomir Glišić, Nenad Radović, Djordje Drobnjak, **Abdunnaser Fadel**, Critical stress for cleavage fracture in continuously cooled medium carbon V-microalloyed steel, *Procedia Materials Science* 3 (2014) 1226 – 1231.
- 18- Abdunaser Hamza Fadel**, Pearlitic Transformation by Isothermal Decomposition in Titanium and Titanium Free Micro Alloyed Steel, *Al academia Journal for Basic and Applied Science*, Vol.2. No.2 2020.
- 19- Abdunaser Hamza Fadel**, Effect of Isothermal Heat Treatment Temperature and Time on Microstructure and Mechanical Properties of Titanium Free Medium Carbon Micro Alloyed Steel, *Al academia Journal for Basic and Applied Science*, Vol.3. No.1 2021.
- 20- Abdunaser Hamza Fadel**, Nenad Radović, Metallographic Techniques for the Determination of the Martensite Transformation Start Forming Temperature in Medium Carbon Vanadium Titanium and Titanium Free Micro Alloyed Steel, *Al academia Journal for Basic and Applied Science*, Vol.3. No.3 2021.
- 21-** Stefan Dikić, Dragomir Glišić, **Abdunnaser Fadel**, Gvozden Jovanović, Nenad Radović, Structure and Strength of Isothermally Heat-Treated Medium Carbon Ti-V Microalloyed Steel, *Metals. J*, Vol.11. No. 7, 2021
- 22- Abdunaser Hamza Fadel**, Najeeb A Yahya, Experimentally Determination of Burst Pressure and Failure Location of Liquefied Petroleum Gas Cylinder, *University Bulletin* 4 (23), 2021.
- 23-** Dragomir Glišić, Nenad Radović, DJ Drobnjak, **Abdunnaser Fadel**, Cleavage Fracture in Continuously Cooled V-Micro alloyed Medium Carbon Steel, [Fracture at all Scales](#) pp 209–219, 2017
- 24-** Djordje Drobnjak **Abdunaser Fadel**, Dragomir Glisic, Nenad Radovic, SOME ASPECTS OF DECOMPOSITION OF MEDIUM CARBON VANADIUM MICROALLOYED STEEL, VII International Metallurgical Congress, OHRID MACEDONIA (2016).
- 25-** Gvozden Jovanović and Nenad Radović Stefan Dikić, Dragomir Glišić, **Abdunaser Hamza Fadel**, Physical simulation of finish rolling of microalloyed steels in isothermal conditions, *Chemical Industry* Vol. 76, Issue 4, 227-236 (2022).
- 26- Abdunaser Hamza Fadel**, Najeeb A Yahya, Experimental and Finite Element Analysis of Liquefied Petroleum Gas Cylinder, *University Bulletin* 24 (3), 2022.

**27- Abdunaser Hamza Fadel**, Musa M. Abdullrhman, Mohamed Y. Elsagisli, Evaluation and Performance Analysis of Liquefied Petroleum Gas Cylinders, Iraqi Journal of Chemical and Petroleum Engineering, Vol. 25 No. 1 (March 2024) 37 – 47.

### **Scientific / Research Supervision of Undergraduate and Graduate Students**

□ In spring 2022, Ms. Ayada M. Rashid successfully defended her thesis under the title of (*Some Mechanical Properties Evaluation of CAD/CAM PMMA Denture Composed to Compressed Molded PMMA*). According to the decision of the Dean of the School of Engineering Sciences at the Academy of Graduate Studies Janzour No. 52 of 2022

□ **Now in the spring 2025** we are supervising three postgraduate students, the first from the University of Tripoli, Faculty of Engineering, Department of Materials and Metallurgical Engineering, and his name is Mahmoud Idris, and the other two students from the Academy of Graduate Studies Janzour - School of Engineering and Applied Science - Department of Biomedical Engineering and heres names are (1) Rima Mohammed Amhamed Quraisya, According to the decision of the Dean of the School of Engineering and Applied Sciences Number (02) for the year 2025, under the title of: *Evaluation of Aesthetic Dental Vener by Mechanical Properties and Surface Characteristics* (2) Safia Omar Kreir under the title of: *Evaluation of Wear Resistance and Bond Strength Between Poly Ether Ketone Teeth and Acrylic Teeth with Denture Base - Comparative Study.*

#### **Appointed as external examiner for the following MSc Researches**

□ Mohamed Omer Abduljalil. Libyan Academy for Higher Studies, Tripoli-Libya *Analysis of Fatigue Behavior on Medium Carbon Steel for Different Heat Treatment Process* - Code No. 152 (**Graduated** in December 2017).

□ Kalid Abdul Wahab Aljali, Libyan Academy for Higher Studies, Tripoli-Libya *Improving Engineering Performance of Aircraft Maintenance* - Code No. 169 (**Graduated** in August 2017).

□ Mahmoud Mohamed Belhaj, University of Tripoli, Faculty of Engineering, Department of Materials and Metallurgical Engineering, *Correlation of Retained Austenite Amount in Oil Quenched Carbon Steel with Electrical Resistivity* (**Graduated** in February 2023).

- Also appointed as first Supervision in more than 20 B.Sc. Projects or Researches.

### **Research Projects**

➤ Case study (Technical evaluation of welded steel gas cylinders, include technical specification and mechanical testing according to international standard).

- Case study (Evaluation of gear wear performance used in Libyan cement industry).
- Case study (Technical evaluation of steels produced by Mos Rata Steel Factory).
- Case study (Inspection report on post welding heat treatment of welded pipes, requested by general water Authority G.S.P.L.A.J).
- Case study (On Post Weld Heat Treatment Qualification of type 304/304L Stainless Steel).
  - Determination of transition temperature of low and medium carbon steel using notch-bar impact test « as a case study ».
  - Determination of fatigue limit of low carbon steel « as a case study ».
  - Effect of test parameters on the  $T_{nr}$  and  $A_{r3}$  temperatures of medium carbon micro alloyed steel « as a case study ».
  - Local Production of Borate Glasses. (Preparation of Raw Material, Melting and Case Engineering Testing) « as a case study ».

## **Teaching Experience**

### **Firstly - MSc Courses**

- MEI 678 Light Metals and Alloys (**Department of Medical Engineering** - Libyan Academy for Higher Studies, Tripoli – Libya, Semester 1&2 – 2018 / 2019).
- BME 808 Materials Engineering (**Department of Medical Engineering** - Libyan Academy for Higher Studies, Tripoli – Libya, Semester 1&2 – 2018 / 2019).
- BME502 Medical Physics (**Department of Medical Engineering** - Libyan Academy for Higher Studies, Tripoli – Libya, Spring 2024).
- BME503 Material Science I (**Department of Medical Engineering** - Libyan Academy for Higher Studies, Tripoli – Libya, Spring 2024).
- BME603 Composite Materials (**Department of Medical Engineering** - Libyan Academy for Higher Studies, Tripoli – Libya, Fall 2024).
- BME630 Strength of Materials (**Department of Medical Engineering** - Libyan Academy for Higher Studies, Tripoli – Libya, Spring 2024).
- Examiner for Three Master's Thesis and Now a Supervisor for Two Master Thesis

### **Secondly - BSc Courses**

- ▶ Al Zawia University, College of Natural Resources Engineering
- PE484 Numerical Methods
- PE513 Water Treatment and Corrosion Control in Petroleum Engineering

- PE520 Petroleum Engineering Seminar
- GeE364 Construction Materials
- GeE585 Ore Evaluation
- GeE350 Rock Mechanics
- GeE362 X – Rays Diffraction
- GeE475 Industrial Rocks and Minerals
- GeE230 Mineralogy and Petrology
- GE133 Properties of Materials
- GE130 Workshop Technology
- GE152 Technical Writing
- ME206 Metallurgy
- ME214 Production Engineering I
- CHE211 Physical Chemistry
- Aircraft Materials (Technical Faculty of Civil Aviation and Meteorology).
- Quantum Chemistry & Analytical Chemistry (Faculty of Science, Department of Chemistry)