

# Curriculum Vitae



## Personal Information

Name: Dr. Emad Saadi Al-Hassani  
Occupation: Professor  
Field of Interests: Metallurgy Engineering/ Smart Materials  
Date & Place of Birth: 1969 / Baghdad -Iraq  
Nationality: Iraqi  
University Graduation: University of Technology, Baghdad -Iraq  
Languages: Arabic and English (speech and writing).  
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## College Degrees

Degree	year	Major	Minor	Donor
<i>Ph.D.</i>	2007	Metallurgical Engineering	Smart Materials	university of Technology
<i>M.SC.</i>	1998	Metallurgical Engineering	Metallurgical Engineering	university of Technology
<i>B.SC.</i>	1995	Production Engineering and Metallurgy	Production Engineering and Metallurgy	university of Technology
<i>Diploma</i>	1991	Metallurgy Fabrication	Metallurgy Fabrication	Technical Institute

## Scientific Title

2018	Professor /Materials Engineering Department/ University of Technology.
2010-2018	Assistant Professor/ Materials Engineering Department/ University of Technology.
2007-2010	Lecturer/ Materials Engineering Department/ University of Technology.
2002-2007	Assistant Lecturer / Materials Engineering Department/ University of Technology.

## **Administrative Positions**

1. Administrative Assistant of Materials Engineering Department/ University of Technology.
2. Scientific Assistant - Head of Scientific and postgraduate Affairs for Department of Materials Engineering/ University of Technology.
3. Head of General Materials Branch in the Materials Engineering Department / University of Technology
4. Director of Laboratories in Materials Engineering Department.

## **Teaching Experience**

### **1<sup>st</sup> Lectures**

#### *A. Teaching for Under-Graduate*

1. Metals Engineering
2. Powder Metallurgy
3. Corrosion Behavior
4. Engineering Mechanics (Static & Dynamic)
5. Engineering Drawing

#### *B. Teaching for Post- Graduate*

1. Advanced Corrosion Engineering
2. Advanced Metallic Materials
3. Powder Technology Processes
4. Heat Treatment and Phase Transformation

### **2<sup>nd</sup> Lab experience**

1. Metals Engineering
2. Powder Metallurgy
3. Corrosion

## **Scientific committees**

Member of several scientific and temporary scientific committees

## **Memberships in society**

1. Consultant in the Iraqi Engineers Union
2. Member of the administrative board of Tawfiq (Together for Iraq) affiliated with the Ministry of Higher Education and Scientific Research
3. Member of the Iraqi Society for Nanotechnology
4. Member of the Iraqi Forum of Inventors

### **Other activities**

1. Number of M.Sc. Discussion Panels (Discluding Supervision): more than 50
2. Number of PhD. Discussion Panels (Discluding Supervision): more than 40
3. Member of many scientific and administrative activities and civil society service
4. Reviewer of many scientific research
5. Reviewer of many master's and doctorate degrees scientifically

### **Supervision of Graduate Students**

Supervising Doctoral Students	
Student's Name	Thesis Title
Isra Reyadh	Reducing the Allergic Reactions of Drug Inactive Ingredients by Natural Materials
Mahmmod Shaker	Controlling the archwires Infections Problems by Self - Sanitizing Materials
Ammar Razaq	Improvement of Metallic Implants for Biotribological Applications
Zaynab Jawad	Enhancement of bone formation by metal addition in bone grafting applications
Amied Raad	Improvement of interaction between cells and dental implants surface
Saja Akeel Omran	Preparation and characterization of Drug Delivery Biomaterials System
Alaa Abd Mohammed	Preparation and Characterization of Prosthesis Composite Materials for Medical Applications
Fatima Jafar Mohammed	Titanium Topography Activation to Improve Biocompatibility during Implantation
Ola Hussein Ali	The investigation along hard facing microstructure by different buffer layer of tool steel
Manar Abdel Jabbar Najm	Preparation and characterization of \artificial Esophagus polymer base shape memory alloy
Supervision of Master's Students	
Student's Name	Thesis Title
Rusel Ali	Improvement of Skincare Products by Polymer Addition

Asma khalel	Improvement of cosmetic biomaterials by natural additions
Amna Mohammed	Surface enhancement of Magnesium Implants for long term applications
Sara Amer	Preparation and characterization of ophthalmic biomaterials
Ahmad Abdulameer	Preparation Ni-Ti alloy fibers to improve portland cement
Randa Mostafa	Preparation Ni-Ti nanofibers for Biomaterials applications
Wehad Ayad	Binary titanium alloys as dental implant materials
Balsam Mounem Saleh	Effect of silicon addition on the mechanical properties of Cp- Ti
Kawther Saleh Mahdi	Development of Ti-based alloys for biomedical applications
Marwa Subhi Atallah	Erosion wear behavior of polymer matrix composites reinforced by carbon nano tubes
Sarah Talal Hatem	Investigation of corrosion behavior of Cu-based shape memory alloys in different media
Zina Abdel Amir	Preparation and characterization of biomedical Co-base shape memory alloys
Reem Alaa	Erosion wear behavior of composite material reinforced by different system
Alaa Abd Mohammed	Tensile and Buckling of Unsaturated Polyester Reinforced with Glass Fibers
Fatima Jafar Mohammed	Effect of alloying elements on bio-medical Ti-Ta shape memory alloys
Rasha Hussein Ali	The role of Ta and Nb addition on the transformation temperature of NiTi shape memory alloy

### **Published Papers**

No	Name of research	Single/ Common (names of researchers)	Name of journal	IF	Year of Publishing
1	The effect of Ni-Ti ultrafine particles addition on the elongation properties of the PVA electrospun fibers	Randa M. Al-Tuhafi Emad S. Al-Hassani; Akram R. Jabur	AIP Conference Proceedings		2023
2	Promote Osseointegration Through Surface Functionalization of Ti-Zr Alloy by Nano Composite Fiber	Amjed Al-khateeba Emad S. Al-Hassani Akram R. Jabur Suriani Binti Abu Bakar	Engineering and Technology Journal 41 (06)		2023
3	Preparation and Characterization of Hybrid Composite Material for Maxillary Sinus Augmentation	Zainab Jawad Kadhim- Fatimah J. Al-Hasani Emad S. AlHassani	Silicon		2023
4	Preparation and Characterization of an Electrospun Polycaprolactone/Polyurethane Scaffold for Soft Tissue Applications	Manar A. Najim Akram R. Jabur Ahmed M. Al-Shammari Emad S. Al- Hassani Waleed A.H. Al Nasir Khansaa Raad,	Advanced Materials Research		2023
5	In Vivo and In Vitro Biological and Histological Evaluation of Cordierite-Hydroxyapatite Ceramic Grafting Powder During Maxillary Sinus Augmentation in Rabbit Model	Zainab Jawad Kadhim Fatimah J. Al-Hasani Emad S. Al-Hassani	Journal of Inorganic and Organometallic Polymers and Materials		2023
6	Metallic Implant Surface Activation through Electrospinning Coating of Nanocomposite Fiber for Bone Regeneration	Amjed Al-Khateeb Emad S. Al-Hassani Akram R. Jabur	Hindawi International Journal of Biomaterials		2023
7	Investigation the Bioactivity of Cordierite/Hydroxyapatite Ceramic Material Used in Bone Regeneration	Zainab Jawad Kadhim Fatimah J. Al-Hasani Emad S. Al-hassani1	Silicon		2023
8	Improving the Compressive and Bending Properties of Cement by Reinforcing PVA Fibers Containing Nitinol Nanopowder	Ahmed A. Chasib Akram R Jabur Emad S. Al-Hassani	International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability:		2023

			TMREES22Fr AIP Conf.		
9	Effect of Cordierite Additions on Mechanical Properties of Hydroxyapatite Used in Medical Applications	Zainab J.Kadhim Fatimah J. Al-hasani Emad S. Al-hassani	Engineering and Technology Journal 41 (06) (2023)		2023
10	In Vitro Study: Bioactivity, Biocompatibility and Antibacterial Behavior for Polyetheretherketone Composites	Alaa A. Mohammed Emad S. Al-Hassani Jawad K. Oleiwi	Journal of Biomimetics, Biomaterials and Biomedical Engineering		2023
11	Active nanoceramic compound dipped in biopolymers to create composite coating for metallic implant surface	Amjed Al-Khateeb Emad S. Al-Hassani, Akram R. Jabur	Heliyon		2023
12	Effect of different polycaprolactone scaffolds concentration on metoprolol tartrate release ratio	Saja A. Moosa Akram R. Jabur Emad S. Al-Hassani	AIP Conference Proceedings		2022
13	Enhanced the Structure of Ophthalmic Implants (Rigid Contact Lenses) by Aloe Vera Addition	Sara Alani Fatimah J. Al-Hasani Emad S. Al-Hassani	Key Engineering Materials		2022
14	Evaluation of PCL Electrospun Scaffolds Concentration on Metformin Hydrochloride Release Ratio	Saja A. Moosa Akram R. Jabur Emad S. Al- Hassani Ahmed M. Al-Shammari	Engineering and Technology Journal 40 (12) (2022)		2022
15	Surface Enhancement of Magnesium Implants for Long Term Applications	Amna M. Al-Janabi Fatima J. Al-Hassani Emad S. Al-Hassani	Key Engineering Materials		2022
16	Effect of Adding Silver Element and Zirconia Ceramic on Corrosion Behavior and Mechanical Properties of Pure Titanium	Wehad A. Al-Rawy Emad S. Al-Hassani	Engineering and Technology Journal Vol. 39, Part A (2021), No. 05,		2021
17	Preparation and Characterization of NiTi/PVA Nanofibers by Electrospinning	Emad S. Al-Hassani, Akram R. Jabur, Randa M. Al-Tuhafi	Engineering and Technology Journal 39 (11) (2021)		2021
18	Preparation and Physical	Saja A. Moosa	Key		2021

	Properties of PCL-Metoprolol Tartrate Electrospun Nanofibers as Drug Delivery System	Akram R. Jabur Emad S. Al- Hassani	Engineering Materials		
19	The effect of Nanoparticles (n-HAp, n-TiO <sub>2</sub> ) on the Thermal Properties and Biomechanical Analysis of Polymeric Composite Materials for Dental Applications	Alaa A. Mohammed, Jawad K. Oleiwi Emad S. Al-Hassani	Nano Hybrids and Composites		2021
20	Evaluation of some properties of polyetheretherketone composites used for biomedical applications	Alaa A. Mohammed, Emad S. Al-Hassani Jawad K. Oleiwi	IOP Conference Series: Materials Science and Engineering		2020
21	Influence of Nanoceramic on Some Properties of Polyetheretherketone Based Biocomposites	Alaa A. Mohammed Jawad K. Oleiwi Emad S. Al-Hassani	Engineering and Technology Journal Vol. 38, Part A (2020), No. 08,		2020
22	Effect of Ag addition on Cp-Ti dental implant	Wehad A. Al-Rawy, Emad S. Al-Hassani	AIP Conference Proceedings		2019
23	Effect of laser pulses on ion release behavior of Ti-base alloys	Emad S. Al-Hassani	AIP Conference Proceedings		2019
24	The effect of annealing on the behavior of polyetheretherketone composites compared to pure titanium	AlaaAMohammed Emad S. Al-Hassani JawadKOLEiwi SeyedRGhaffarian,	Materials Research Express		2019
25	The nanomechanical characterization and tensile test of polymer nanocomposites for bioimplants	Alaa A. Mohammed, Emad S. Al-Hassani Jawad K. Oleiwi	AIP Conference Proceedings		2019
26	Effect of Nano Carbon Tube on the Mechanical and Physical Properties of Composites Based on Resin Route	Aseel B. Abdul-Hussein Emad S. AL-Hassani Marwa Subhi	Engineering and Technology Journal Vol. 36, Part A, No.4, 2018		2018
27	Effect of polymer coating on the osseointegration of CP-Ti dental implant	Emad Al-Hassani, Fatima Al-Hassani, Manar Najim	AIP Conference Proceedings		2018
28	Investigation of Microstructure and Chemical Analysis Along Weldments AISI 410 MSS/ER	Emad S. Al-Hassani	Engineering and Technology		2018

	Nicrmo-3		Journal Vol. 36, Part A, No. 5, 2018		
29	Effect of Dual Surface Activation on the Surface Roughness of Titanium Dental Implant	Emad S. Al-Hassani, Fatima J. Al-Hassani,	Journal of Natural Sciences Research		2017
30	Effect of ultrasound surface activation on the surface roughness of titanium dental implants	Emad S. Al-Hassani Fatima J. Al-Hassani	ADVANCES in NATURAL and APPLIED SCIENCES		2017
31	Evaluation of Stem Cells' Growth on Electrospun Polycaprolactone(PCL) Scaffolds Used for Soft Tissue Applications	Akram R. Jabur Emad S. Al- Hassani Ahmed M. Al-Shammari Manar A. Najim Aymen A. Hassan Aesar A. Ahmed	International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability: TMREES17  Energy Procedia		2017
32	Investigation of Corrosion Behavior forCopper-Based Shape Memory Alloys in different Media	Emad S. Al-Hassani A.H. Ali S.T. Hatem	Engineering and Technology Journal Vol. 35, Part A, No. 6, 2017		2017
33	Investigation of the Ion Release from Titanium Implant Surface Treated by Nd - YAG Laser	Emad S. Al-Hassani and Fatima J. Al-Hassani	ADVANCES in NATURAL and APPLIED SCIENCES		2017
34	Mechanical and Physical Properties of Nano Carbon Tube with Carbon Fiber Reinforced with Polyester Resin	A.B. Abdul-Hussein Emad S. Al-Hassani M. Subhi	Engineering and Technology Journal Vol. 35, Part A, No. 5, 2017		2017
35	Welding procedures of Turbine Blades byUsing ER 309L Austenitic Filler Wire	A.H. Fadhil Emad S. Al-Hassani K.H. Abbas H. A. Olaa	Engineering and Technology Journal Vol. 35, Part A, No. 1, 2017		2017
36	Effect of (Ta &Nb) on Corrosion	Emad S. Al-Hassani	Eng.		2016



	Behavior of Nitinol Alloys		&Tech.Journal, Vol.34,Part (A), No.9,2016		
37	Effect of Cr Addition on Ti-Base Shape Memory Implant	Emad S. Al-Hassani	The Iraqi Journal For Mechanical And Material Engineering, Vol.16, No1, 2016		2016
38	Mechanical and physical properties of carbon nano tubes with kevlar fiber reinforced with polyester resin	Aseel Basim Abdul-Hussein Emad S. AL-Hassani, Marwa Subhi Atallah	Iraqi Journal of Physics		2016
39	Preparation and Characterization of Biomedical Ni-Co-Al Shape Memory Alloys	Emad S. Al-Hassani Sahib M. Al-Saffar Zena Abdul Ameer	Eng. &Tech.Journal, Vol.34,Part (A), No.7,2016		2016
40	Welding Repair Of Blade Steam Turbine By Inconel-82 And Investigation Diffusion Elements Along Weldments	Fadel A. Hashim, Emad S. Al-Hassani Abbas K. Al-Saadi Olaa H. Ali	ADVANCES In NATURAL And APPLIED SCIENCES		2016
41	Influence of Coating with Some Natural Based Materials on the Erosion Wear Behavior of Glass Fiber Reinforced Epoxy Resin	Aseel Basim Abdul Hussein Emad Saadi AL-Hassani Reem Alaa Mohamed	Al-Khwarizmi Engineering Journal, Vol. 11, No. 2		2015
42	Effect of Nature Materials Powders on Mechanical and Physical Properties of Glass Fiber / Epoxy Composite	Aseel Basim Abdul-Hussein Emad S. AL-Hassani Reem Alaa Mohammed	Eng. &Tech.Journal, Vol.33,Part (A), No.1,2015		2015
43	Erosion Wear Behavior of Industrial Material Reinforced Epoxy Resin Composites and its Coating with Natural Based Material	Aseel Basim Abdul-Hussein Emad S. AL-Hassani Reem Alaa Mohammed	Eng. &Tech.Journal, Vol.33,Part (A), No.4, 2015		2015
44	Effect of Alloying Elements (Mo and Al) on Biomaterials Ti-Ta Shape Memory Alloys	Sahib M. Al-Saffar Emad S. Al-Hassani Fatima J. Al-Hassani	Eng. & Tech. Journal , Vol.32,Part (A), No.4, 2014		2014
45	Modeling and Buckling Analysis of Polymeric Composite Columns	Jawad Kadhim Oleiwi Emad S. Al-Hassani Alaa Abd Mohammed	Eng. & Tech. Journal ,Vol.32, Part (A), No.5,		2014

46	Effect of industrial powder on mechanical properties of glass fiber reinforced epoxy composite	Aseel Basim Abdul-Hussein, Emad S. Al-Hasani, Reem Alaa Mohamed	Iraqi Journal of Physics		2014
47	Experimental Investigation and Mathematical Modeling of Tensile Properties of Unsaturated Polyester Reinforced by Woven Glass Fibers	Jawad Kadhim Oleiwi Emad S. Al- Hassani Alaa Abd Mohammed	Eng. & Tech. Journal , Vol.32,Part (A), No.3, 2014		2014
48	Tensile and Buckling Analysis of Polymeric Composite Columns	Jawad Kadhim Oleiwi Emad S. Al- Hassani Alaa Abd Mohammed	Basrah Journal for Engineering Sciences, vol. 14, no. 2, 2014		2014
49	Characterization of Ni–Ti shape memory alloys prepared by powder metallurgy	Adnan S. Jabur Jafar T. Al-Haidary Emad S. Al-Hassani	Journal of Alloys and Compounds		2013
50	Characterization of Niti Super Elasticity Shape Memory Alloys	Sahib M. Al-Saffar Emad S. Al-Hassani Rasha Ali Hussein	Eng. &Tech. Journal, Vol. 31, Part (A), No.16, 2013		2013
51	Finite Element Analysis Using Matlab of Oxidation Kinetics in Air of Steel-T21 Alloy Coated By Simultaneous Germanium-Doped Aluminizing-Siliconizing Process	Abbas Khammas Hussain Laith KaisAbbas Emad S. AL-Hassani	International J. Of Engg. Research & Indu. Appls. (IJERIA)		2013
52	Corrosion Behavior of Copper-Steel Particulate Composite	J. T. AL-Haidary Emad S. AL-Hassani	Modern Applied Science		2011
53	Effect of Chemical Solutions on Mechanical Properties of Epoxy Composite Reinforced With Glass Fibers	Emad S. AL-Hassani	Eng. & Tech. Journal, Vol.28, No.9, 2010		2010
54	Effect of Different Chemical Solution On Tensile Strength of Polymer Composite	Emad S. AL-Hassani Sheelan R. Areef	Eng. & Tech. Journal, Vol.28 , No.4 , 2010		2010
55	Effect of Uv Radiation on Dielectric Constant And Thermal Conductivity In Epoxy Phenol Blends	Emad S. AL-Hassani	Eng. & Tech. Journal, Vol.28, No.10, 2010		2010
56	The Effect of Fiber Orientation on Creep Behavior And Flexural Strength In Epoxy Composites	Emad S. AL-Hassani Sheelan R. Areef	Eng. & Tech. Journal, Vol.28, No.7, 2010		2010
57	Study of Tensile Strength and Hardness Property for Epoxy	Emad S. Al-Hasani	Eng. & Technology,		2007

	Reinforced With Glass Fiber Layers		Vol.25, No.8, 2007	
58	Study of wear resistance of (Zn 12) alloys prepared by vibrational casting	Emad S. Al-Hasani	10th Scientific Conference for Foundation of Technical Education – Baghdad	2001
59	Friction Welding for Austenitic Stainless Steel 316L with Aluminum Alloy 5164.	J. T. AL-Haidary Emad S. AL-Hassani	Engineering & Technology Journal	2001
60	Friction Welding of Austenitic Stainless Steel 316 L with different Types of Copper	J. T. AL-Haidary Emad S. AL-Hassani	Engineering & Technology Journal	2001

### **Conferences**

1. The first International Conference on Mechanical Engineering,/ Basra university / BICME2014 ( 8-10 April) 2014
2. First International Conference on Laser and Advanced Materials Applications (16-18 December 2014)
3. International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability, TMREES17, 21-24 April 2017, Beirut Lebanon)
4. International Conference on Technologies and Materials for Renewable Energy, Environment and Sustainability, TMREES18, 1-3 February 2018, Beirut Lebanon)
5. The 6<sup>th</sup> International Conference of Nanotechnology and Advance Materials (ICNAMA 2018) 2-3/ 5/2018- University of Technology
6. 12th International Invention Fair in the Middle East January 16 – 19, Feb, 2020
7. 5<sup>th</sup> International Conference on Engineering Technology and Innovation (ICETI 2021) will be held on October 13-17, 2021 in Istanbul, Turkey
8. International Conference on Inovative Materials, Manufacturing and Advanced Technologies (IMMT 2022) Tunisia, Sousse, October 27-29/2022
9. 8th Istanbul International Invention Fair /ISIF'23, which will be held at the Istanbul Atatürk Airport TEKNOFEST Festival area between 27th April – 01<sup>st</sup> May, 2023

## **Patents**

Patent Title	Patent No.	Patent Date
Coating of laboratories drainage pipes and oil products pipes with erosion-resistant composite materials reinforced with carbonates and natural wastes	4618	23/6/2016
Preparation and Characterization of an Artificial Tissue Using Polymer Blend by Electrospinning Technique	4721	27/10/2016
Substitute manufacturing materials resistant to erosion /corrosion of the airframe and propellers of ships & boats marine composed of nano materials composites	4863	28/2/2017
Preparation of Titanium Dental Implant by Powder Technology Method and Improve the Surface Roughness Using Ultrasound	5134	19/ 11/2017