

Dr. Mostafa Rashad Hussein

LazGender: Male

Date of birth: -21 -Mar – 1982

Employment: -

- 1- lecture at Materials Science and Nanotechnology Department, Faculty of postgraduate studies for advanced science, Beni- Suef University
- 2- Quality Manager at The Nanotechnology Excellence Center.
- 3- Researcher in central metallurgical research and development institute.

Address: Block (654) , District (11) , Neighborhood (80) ,10th of Ramadan City.

Mobil: 202- 01022672884

Tel: 055-4469560

E-mail: mostafalaz1@gmail.com

Moustafa.rashad@psas.bsu.edu.eg



Education: -

<u>College</u>	<u>Degree</u>	<u>Year of award</u>
Faculty of Science	Ph.D.Thesis	Seb. 2020
El Azher University	M.Sc.Thesis	Aug. 2015
Egypt	B. Sc. (Chem.)	May 2004

Experience: -

1-Member at Materials Science and Nanotechnology Department, Faculty of postgraduate studies for advanced science, Beni- Suef University(2020-present): -

- Teach Courses (Energy conversion and storage)
- Teach Courses (Applied physical chemistry)
- Teach Courses (Material Science 1)
- Teach Courses (Material Science 2: Magnetism and Nanotubes)
- Develop and implement course materials that needs of diverse learners.
- Conduct research in materials science and nanotechnology.
- Industrial chemistry (water treatment, cement industry, electro plating, refining and winning of metal from industrial waste water).

2- Quality Manager at The Nanotechnology Excellence Center: -

- Develop and implement quality management system procedures and policies. (ISO17025)
- Ensure compliance with ISO 17025 accreditation standards.
- Conduct internal audits and manage external audits (ISO 17025).

3- Researcher in central metallurgical research and development institute: -

- Conducted advanced research experiments in the synthesis and characterization of nanoscale materials.
- Collaborated with professors and scientists on various projects related to electrochemical metallurgy, corrosion studies, and battery coefficients.
- Assisted in designing experimental setups, performing data analysis, and interpreting research findings.
- Published research papers in peer-reviewed journals and presented findings at international conferences.

Training: -

Skills acquired	Place	Dates
Quality control management	El Garhy steel	Feb.2005
Alloy production and steel making	(CMRDI)	Sept.2013
Applied Electrochemistry and nano metal oxides preparations	Extractive metallurgy Division (CMRDI)	1Aug-2019
Electrochemical techniques Adopted techniques for characterizations (XRD,SEM, VSM, LES)	CMRDI, El Garhy steel	Sep. 2020

- **Qualified course for obtaining ISO 17025 accreditation, such as internal auditing, uncertainty estimation.2024**

Professional Activities and Employment: -

Employer	Position	Dates
Researcher	Chemical and Electrometallurgy Division (CMRDI)	Dec. 2011-Mar2020
Lecture	Department of Basic Science at the Higher Institute of Engineering And technology. Faculty of postgraduate studies for advanced science, Beni- Suf University	Dec.2015 to 2022 Dec.2020 to now

<u>Membership of Associations</u>	<u>level</u>	<u>Year of award</u>
Egyptian syndicate of scientific professions	member	2004

Fields of Research Interests: -

- Industrial wastewater treatment.
- Preparation of nano oxides powder and Films by electro deposition.
- Electro deposition of advanced and nanocrystalline materials.
- Electro deposition of Metals on semiconductors.
- Electrodeposition of metallic multilayer.
- Corrosion studies and inhibitions.
- Electrodeposition using different voltametric techniques.
- Metal electro winning from aqueous solution and molten salts.
- Metal electro refining in aqueous solutions and molten salts.
- Electro deposition of binary alloys and thin films,
- Study chemical composition of Steel and its mechanical properties.
- Synthesis of cast iron by induced furnace.
- Membranes.

Publications and Published Papers: -

A list of full publications contains 7 articles in Journals, four research reports on industrial projects, and 7 presentations in domestic and international Conferences.

- 1- Elsayed Mostafa. Elsayed, M.M. Rashad, [M.R. Hussein](#) and I. A. Ibrahim “Novel electrochemical process for the deposition of nanocrystalline copper ferrite thin films” International [conference](#) on Nanomaterials Synthesis, Fabrication and Applications (Nanotech Challenges 2014), 14-17 April 2014, Cairo, Egypt, Poster 3 p 63
- 2- E. M. E. M. Elsayed, [M.R. Hussein](#), The Fourth Ain Shams University [Workshop](#) on Oilfield Chemistry, Faculty of Engineering, “Synthesis of nanocrystalline zinc oxide film by electrochemical techniques: a material for liquefied petroleum gas and other gases sensing”, Faculty of Engineering, Ain Shams University, Cairo Egypt. 2 December 2015.
- 3- E. M. Elsayed, M.M. Rashad, H.F.Y. Khalil, [M.R. Hussein](#), M.M.B. El-Sabbah and I. A. Ibrahim “The effect of solution pH on the electrochemical performance of nanocrystalline metal ferrites MFe_2O_4 ($M = Cu, Zn, \text{ and } Ni$) thin films”, Appl Nanosci (2016) 6:485-494, DOI 10.1007/s13204-015-0453-3.
- 4- E. M. Elsayed, M.M. Rashad, H.F.Y. Khalil, [M.R. Hussein](#), M.M.B. El-Sabbah and I. A. Ibrahim, “The Fifth Ain Shams University [Workshop](#) on Oilfield Chemistry, Faculty of Engineering, “Synthesis of nanocrystalline metal ferrites by electrochemical techniques for Liquefied petroleum gas sensing”, Faculty of Engineering, Ain Shams University, Cairo Egypt. 21 April 2016. [Poster](#).
- 5- E. M. Elsayed, M.M. Rashad, H.F.Y. Khalil, [M.R. Hussein](#), M.M.B. El-Sabbah and I. A. Ibrahim, “Italian-Egyptian Workshop on Energy & Related Materials, “Synthesis of nanocrystalline copper ferrites by electrochemical techniques for toxic gases sensing, Li ion battery and Medical Applications”, Cairo Egypt. 17-19 Oct 2016. [Poster](#).
- 6- E. M. Elsayed, M.M. Rashad, H.F.Y. Khalil, [M.R. Hussein](#), M.M.B. El-Sabbah and I. A. Ibrahim, “Synthesis of nanocrystalline copper ferrites by electrochemical techniques for toxic gas sensing, Li ion batteries and Medical Applications”, Journal of Renewable Energy and Sustainable Development (RESO), volume 3, Issue 3, December 2017-ISSN 2356-8569.
- 7- E. M. Elsayed, M. M. Moharam, I.A.Ibrahim, H.F.Y. Khalil, [M. R. Hussein](#) and M.M.B. El-Sabbah, Electrochemical-Anodization Synthesis of Spinel Cobalt Ferrite Films on Various Substrates From Medium, Journal of Basic and Applied Chemistry (JBAC), 8 (1)1-12, 2018.
- 8- E. M. Elsayed, [M.R.Hussein](#), H.F.Y. Khalil, M.M.B. El-Sabbah, I.A.Ibrahim, “Electrochemical-anodization synthesis of cobalt ferrite films on various substrates from non aqueous and aqueous medium for toxic petrochemical gas sensing and pharmaceutical applications” , International [Conference](#) on Materials Science and Engineering: Recent Advances and Challenges, ICMSE-RAC 2018 March 11 – 13, 2018, Alexandria, Egypt.
- 9- E. M. Elsayed, M. M. Rashad, M. M. Moharram, [M.R.Hussein](#), M.M.B. El-Sabbah, I. A. Ibrahim, Electrodeposition-anodization preparation of nanocrystalline nickel ferrite films from aqueous sulfate solutions: a material for sensing of toxic household gases and health monitoring, 10 th international [conference](#) on nano-technology in construction NTC 2018, 13-17 April 2018, Housing & Building National Research Center, Hurgada, Egypt
- 10- E. M. Elsayed, M. M. Rashad, M. M. Moharram, [M.R.Hussein](#), M.M.B. El-Sabbah, I. A. Ibrahim, Electrodeposition-anodization preparation of nanocrystalline nickel ferrite films from aqueous sulfate solutions: a material for sensing of toxic household gases and health monitoring, ISSN 1813 -7911. Интеллектуальные системы в производстве. Intelligent Systems in Manufacturing (Intellekt. Sist. Proizv.) 2018. Том 16, № 3, УДК 691.542 DOI 10.22213/2410-9304-2018-3-169-178.
- 11- E. M. Elsayed, M M Rashad, H.F.Y. Khalil, [M.R.Hussein](#), M.M.B. El-Sabbah, I.A.Ibrahim, "Nanocrystalline zinc ferrite film understanding the electrochemical performance of zinc ferrite films synthesized using electrodeposition" , 2 nd International [Conference](#) on Materials Science and Engineering (ICMSE-2019), March 11 – 13, 2019, Cairo, Egypt.

12- E.M. Elsayed, M.M. Rashad, I.A. Ibrahim, M.R. Hussein , M.M.B. El-Sabbah, "Electrochemical synthesis of nanocrystalline NiFe ₂ O ₄ Thin film from aqueous sulphate bath" Journal of Alloys and Compounds 798 (2019) 104-111
13- E. M. Elsayed, H.F.Y. Khalil, M.M.B. I.A.Ibrahim, M.R.Hussein , M. M. B. El-Sabbah, ,The effect of significant of buffer solution on corrosion processes of cobalt ferrite CoFe ₂ O ₄ thin film on different substrates, Combinatorial Chemistry & High Throughput Screening, CCHTS, 2020, 23, pp 599-610, Bentham Science Publisher, DOI:10.2174/1386207323666191217130209.
14- E. M. Elsayed, M M Rashad, H.F.Y. Khalil, M.R.Hussein , M.M.B. El-Sabbah, I.A.Ibrahim, "Nanocrystalline zinc ferrite film understanding the electrochemical performance of zinc ferrite films synthesized using electrodeposition", Key Engineering Materials ISSN: 1662-9795, Vol. 835, pp 1-6 © 2020 Trans Tech Publications Ltd, Switzerland
15 - M.R.Hussein , , I.A.Ibrahim and E. M. Elsayed, " Cobalt ferrite CoFe₂O₄ films' preparation, description, and their application restrictions in an alcoholic medium ",International Journal of Materials Technology and Innovation,(2023) 70-87.
16- SR Qutb, WZ Tawfik, SI El-Dek, MR Hussein , MS Abdel-wahab" Superior photoelectrodes of nanostructured Mo-doped CuO thin film for green hydrogen generation from photoelectrochemical water-splitting"International Journal of Hydrogen Energy 76, 190-201(2024).

Academic Research and technical Experience:

- Member in the fourth Training Course for African Engineers on mineral processing technology, CMRDI & League of Arab States (AFTAAC), Dec 2013- Jan. 2014, Cairo, Egypt.
- Member in the first Training Course for Yemen Engineers on mineral processing technology, CMRDI & League of Arab States (AFTAAC), 25March – 25April .2014, Cairo, Egypt.
- Training programs of scientists for next generation, Academy of Scientific Research and Technology, 21 April-7 May2015.
- Lecturer in the Fifth Training Course for African Engineers on mineral processing technology, CMRDI & League of Arab States (AFTAAC), 7 Feb – 25 Feb 2016, Cairo, Egypt.
- Training programs of scientists for next generation, Academy of Scientific Research and Technology, 14 August-1 Sept 2016.
- Lecturer in the Sixth Training Course for African Engineers on mineral processing technology, CMRDI & League of Arab States (AFTAAC), 5 Feb – 16 Feb 2017, Cairo, Egypt.
- Lecturer in the Practical and theoretical program for Mineral Processing Technology Training Course for Sudan students 17-30 July 2017.
- Lecturer in the Sixth Training Course for African Engineers on mineral processing technology, CMRDI & League of Arab States (AFTAAC), 5 Feb – 16 Feb 2017, Cairo, Egypt.
- Lecturer in the Practical and theoretical training Course for African Engineers on Mineral Processing Technology-Egyptian Agency for Partnership for Development (EAPD) Ministry of Foreign Affairs and CMRDI , Cairo, 18-29 Mar 2018.
- Lecturer in the Practical and theoretical training Course for African Engineers on Mineral Processing Technology-Egyptian Agency for Partnership for Development (EAPD) Ministry of Foreign Affairs and CMRDI , Cairo, 10-21 Mar 2019.
- Members in the Training course of Recent Trends in the Extraction of Metals by electrochemical Techniques at CMRDI 5-9 May 2019. For (Engineers of Army Forces Companies FAC63, FAC360, FAC100).
- Training of 23 student Summer Courses from faculty of Science and Engineering Egyptian universities 14july-9 Sept. 2019.
- [Training of 100 student Summer Courses from faculty of Science and Engineering Egyptian universities 27july-1 Sept. 2024 on \(characterization techniques of nanomaterials \(XRD,SEM,TEM,FT IR,BET,TGA and mass spectroscopy\) and technologies ,devices used to assess the efficiency of using nanomaterials in various applications such as\(water treatment, solar cell, corrosion. Example of this technologies include \(HPLC, GC Mass, LC Mass and UV spectroscopy\).](#)