

PERSONAL INFORMATION

Assoc. Prof. Abdalla Abdelwahab



📍 16 Dar Misr, building 9, Flat16, 10th of Ramadan City, Egypt.

☎ (+2) 01093900100

✉ abdalla.abdelwahab@gu.edu.eg

✉ aabdelwahab@psas.bsu.edu.eg

Sex Male | Date of birth 01/01/1985 | Nationality Egyptian

PERSONAL PROFILE:

My primary goal is to put forth a strong contribution in education and research to the institution especially within my field of expertise. Having been an Associate Professor in two institutions, I have involved myself with various research projects as well as teaching undergraduate and postgraduate students across many platforms. One of my objectives is to partake in the pedagogical success of an institution by putting my best efforts into helping students achieve their best academic performance. As an Associate Professor, I aim for continuous learning and development of my teaching capabilities. With this being said, I am confident that all these objectives can be achieved.

EDUCATION

Mar. 2018- Aug. 2018

Post doc.

Inorganic Chemistry department, Faculty of science, Granada University, Spain.

2013 - 2017

PhD

Inorganic Chemistry department, Faculty of science, Granada University, Spain.

- Carbon gels for the electro-reduction of CO₂ to hydrocarbons, electro-reduction of oxygen, and energy storage.

2010 - 2012

M.Sc.

Physical Chemistry department, Faculty of Science, Lund University, Sweden.

- Quantum Dots Sensitized ZnO Nanowires Solar Cells.

2002 - 2006

B.Sc.

Chemistry department, Faculty of science, Helwan University, Egypt.

EMPLOYMENT AND EXPERIENCE:

March 2024 – To present.	Associate Professor of physical chemistry, Chemistry department, College of Science, University of Ha'il , KSA.
March 2021 – February 2024.	Associate Professor of physical chemistry and nanotechnology, Chemistry department, Faculty of Science, Galala University , Galala, Suez, Egypt.
October 2017 – April 2023	Assistant Professor of Materials Science and Nanotechnology, Faculty of Postgraduate Studies for Advanced Sciences, Beni-Suef University , Egypt.
February 2015 – October 2017	Lecturer Materials Science and Nanotechnology, Faculty of Postgraduate Studies for Advanced Sciences, Beni-Suef University , Egypt.
September 2012 – October 2017	PhD student , inorganic chemistry department, Faculty of Science, Granada University , Spain.
September 2010 – June 2012	Master student , physical chemistry department, Faculty of Science, Lund University , Sweden.

ACADEMIC POSITIONS

February 2023 – February 2024	Director of the quality assurance and accreditation unit, Galala University, Egypt.
September 2019 – September 2021	Vice-director of the international ranking unit, Beni-Suef University, Egypt.

SKILLS:

- Sound knowledge of latest teaching techniques.
- Deep knowledge of student management procedures.
- Familiarity with academic planning and management.
- Ability to plan and manage research projects.
- Ability to assist students in thesis work.

AWARDED PROJETS

- **PI** of project number 25402, funded from STDF agency with **243000 LE** 'Electro-catalytic conversion of CO₂ into hydrocarbons using carbon aerogels-based electrodes. (2018)
- **Co-PI**: of project number 25609, funded from STDF agency with **661500 LE** 'Carbon quantum dots size control using electrochemical method and their application in supercapacitors as a powerful tool for energy storage'. (2020)
- **PI** of project number 39390, funded from STDF agency with **100000 LE** 'Bimetal oxides doped carbon quantum dots as a novel material towards Nano-fluids applications. (2021)

- **Co-PI** for a project funded from STDF agency with **1300000 LE** ‘Clean and economic energy storage system using nanomaterials. (2019)

SUPERVISION

- MSc Students: 14 Graduated: 14
- PhD Students: 3 Graduated: 2

LIST OF PUBLICATION

- [39] Mamdouh, N., Farghali, A.A., El Rouby, W.M.A., **Abdelwahab, A.** Effect of ZIF-67-derived Co_3O_4 on the activity of CNTs/ NiCo_2O_4 nanocomposite for methanol oxidation reaction’ International Journal of Hydrogen Energy, 2024, 93, pp. 878–887
- [38] Kotp, A.A., **Abdelwahab, A.**, Farghali, A.A., Enaïet Allah, A. Facile synthesis of green graphite-based (Ni/Cu/N) MOF composite for a methanol oxidation reaction.’ International Journal of Hydrogen Energy, 2024, 91, pp. 506–518
- [37] Mohamed, H., Enaïet Allah, A., Essam, D., ... **Abdelwahab, A.**, Mahmoud, R. Waste Biomass Utilization for the Production of Adsorbent and Value-Added Products for Investigation of the Resultant Adsorption and Methanol Electro-Oxidation’; *Catalysts*, 2024, 14(9), 574.
- [36] A. A. Kotp, A. **Abdelwahab, A.**, A. Farghali, W. M. A. El Rouby, and A. Enaïet Allah, “Ornated hydrangea-like M-MO/graphitic porous carbon derived via direct carbonization of MOFs for electrooxidation of methanol in alkaline DMFC,” *Diamond and Related Materials*, vol. 145, p. 111119, May 2024, doi: 10.1016/j.diamond.2024.111119.
- [35] I. Mahmoud, A. A. Farghali, W. M. A. El-Rouby, and **A. Abdelwahab**, “Nickel and cobalt-based tungstate nanocomposites as promising electrocatalysts in alkaline direct methanol fuel cells,” *Nanoscale Adv.*, vol. 6, no. 8, pp. 2059–2074, 2024, doi: 10.1039/D3NA01118F.
- [34] H. E. Mansy, M. H. Khedr, and **A. Abdelwahab**, “Palladium functionalized carbon xerogel nanocomposite for oxygen reduction reaction,” *Materials Chemistry and Physics*, vol. 313, p. 128797, Feb. 2024, doi: 10.1016/j.matchemphys.2023.128797.
- [33] Belal, A., Almalki, A. H., Farghali, A. A., Mahmoud, R., Atta, R. R., Allah, A. E., ... **Abdelwahab, A.** (2024). Nitrogen-doped carbon quantum dots as a novel treatment for black fungal bone infections (Mucormycosis): in vitro and in vivo study. *Artificial Cells*,

Nanomedicine, and Biotechnology, 52(1), 131–144.
<https://doi.org/10.1080/21691401.2024.2318212>

- [32] H. A. M. Noureldin, A. **Abdelwahab, A.** M. Abdel-Aziz, G. M. El-Sayed, A. A. Moustafa, and I. H. A. Badr, “Nickel-cobaltite-doped carbon xerogel based voltammetric sensor for olanzapine: Electrochemical characterization and applications,” *Microchemical Journal*, vol. 197, p. 109758, Feb. 2024, doi: 10.1016/j.microc.2023.109758.
- [31] Kamal, W.; Mahmoud, R.; Allah, A.E.; Farghali, A.A.; **Abdelwahab, A.**; Alkhalifah, D.H.M.; Hozzein, W.N.; Mohamed, M.B.E.D.; Abdel Aziz, S.A.A. Controlling Multi-Drug-Resistant Traits of Salmonella Obtained from Retail Poultry Shops Using Metal–Organic Framework (MOF) as a Novel Technique. *Microorganisms* 2023, 11, 2506.
<https://doi.org/10.3390/microorganisms11102506>.
- [30] Amna A. Kotp, **Abdalla Abdelwahab**, Ahmed A. Farghali, Waleed M.A. El Rouby, Abeer Enaïet Allah, Evaluating the Electrocatalytic Activity of Flower-like Co-MOF/CNTs Nanocomposites for Methanol Oxidation in Basic Electrolyte; *RSC Adv.*, 2023, **13**, 27934-27945.
- [29] Elham Mostafa, Mohamed H. Khedr, and **Abdalla Abdelwahab**; 2D WS₂ and MoS₂ Functionalized Nickel oxide/Nanodiamond Supported Carbon Electrocatalysts for Oxygen Reduction Reaction, *J. diamond and related materials* Volume 139, 2023, 110386.
- [28] Karim Ahmed Abbas, Abdalla Abdelwahab, Hesham S. Abdel-Samad, Sayed Sabet Abd-El Rehim, Hamdy H. Hassan; A novel Preparation for Metal-Free Carbon Xerogel in Acidic Conditions and Its Performance as a High-Energy Density Supercapacitor Electrode; *Nanoscale Adv.*, 2023, Advance Article, DOI: <https://doi.org/10.1039/D3NA00517H>.
- [27] Hala Mohamed, Rehab Mahmoud, **Abdalla Abdelwahab**, Ahmed A. Farghali, Fatma I. Abo El-Ela, and Abeer Enaïet Allah; Multifunctional ternary ZnMgFe LDH as an efficient adsorbent for ceftriaxone sodium and antimicrobial agent: sustainability of adsorption waste as a catalyst for methanol electro-oxidation, *RSC Adv.*, 2023, 13, 26069-26088.

- [26] Eid, D.S., Khedr, M.H., El Rouby, W.M.A., **Abdelwahab, A.**, Layered SnSe functionalized carbon composite as high-performance supercapacitor electrode, *Materials Research Bulletin*, 2023, 168, 112456.
- [25] Abeer Enaiet Allah, Mohamed M. EL-Deeb, Ahmed A. Farghali, H. El Moll, **Abdalla Abdelwahab**; Growth of polyoxomolybdate with a porous pyramidal structure on carbon xerogel nanodiamond as an efficient electro-catalyst for oxygen reduction reaction; *RSC Adv.*, **2023**, **13**, 8090-8100.
- [24] Almalki, A.H.; Hassan, W.H.; Belal, A.; Farghali, A.; Saleh, R.M.; Allah, A.E.; **Abdelwahab, A.**; Lee, S.; Hassan, A.H.E.; Ghoneim, M.M.; Abdullah, O.; Mahmoud, R.; Abo El-Ela, F.I. Exploring the Antimicrobial Activity of Sodium Titanate Nanotube Biomaterials in Combating Bone Infections: An In Vitro and In Vivo Study. *Antibiotics* **2023**, *12*, 799.
- [23] Esraa Hamdi, **Abdalla Abdelwahab**, Ahmed A. Farghali, Waleed M.A. El Rouby and Francisco Carrasco-Marín, 2D Hierarchical NiMoO₄ Nanosheets/Activated Carbon Nanocomposites for High-Performance Supercapacitors: The Effect of Nickel to Molybdenum Ratios, *Materials*, **2023**, 16(3),1264.
- [22] Hader Khalifa, **Abdalla Abdelwahab**, S.I. Eldek, and Waleed M.A.El-Rouby, Performance of Ni-doped BiTiO₃ Hollow porous spheres supported reduced graphene oxide as an efficient bifunctional electrocatalyst for oxygen evolution reaction and oxygen reduction reaction, *Applied surface science*, **2023**, 618, 156599.
- [21] Ebtisam Saeed, Ibrahim Abdelwahab and **Abdalla Abdelwahab**, Ni–Co–P functionalized Nitrogen-Doped-Carbon quantum dots for efficient methanol electrooxidation and nanofluid applications, *Journal of Electroanalytical Chemistry*, **2023**, 928, 117083.
- [20] **Abdalla Abdelwahab**, Farghali, Ahmed A, Allah, Abeer Enaiet, Synergy between iron oxide sites and nitrogen-doped carbon xerogel/diamond matrix for boosting the oxygen reduction reaction, *Nanoscale advances*, **2022**, 4(3), pp. 837-848.
- [19] Ibrahim Abdelwahab and **Abdalla Abdelwahab**; Black Phosphorous/Palladium Doped Carbon Aerogel Catalyst for Highly Efficient Ethanol Electro-oxidation; *RSC Adv.*, **2022**, **12**, 31225-31234.
- [18] Kamal W. Mahmoud, Rehab Mahmoud R.; Allah, Abeer Enaiet; **Abdelwahab, Abdalla**; Taha, Mohamed; Farghali, Ahmed A. Insights into synergistic utilization of residual of ternary layered

double hydroxide after oxytetracycline as a potential catalyst for methanol electrooxidation; Chemical Engineering Research and Design, **2022**, 188, pp. 249–264.

- [17] Ghada Abdelrazek, Mohamed M. Sayed, Mohamed M. El-Deeb, Ahmed A. Farghali and **Abdalla Abdelwahab**, 3D Nanohybrid of MoS₂ nanocoils functionalized carbon xerogels for methanol electro-oxidation. Journal of Alloys and Compounds, **2022**. 921. <https://doi.org/10.1016/j.jallcom.2022.166077>
- [16] Zkria, A., Ali, A.M., Mahmoud, I., **Abdelwahab, A.**, El Roubi, W.M.A., Yoshitake, T. Nanodiamond/Conducting Polymer Nanocomposites for Supercapacitor Applications. Engineering Materials (**2022**), pp. 1017–1045. Springer, Cham. https://doi.org/10.1007/978-3-030-94319-6_32.
- [15] **Abdelwahab, A.**, A.A. Farghali, and A. Enaiet Allah, Synergy between iron oxide sites and nitrogen-doped carbon xerogel/diamond matrix for boosting the oxygen reduction reaction. Nanoscale Advances, **2022**. 4(3): p. 837-848.
- [14] Teresa Briz-Amate, Jesica Castelo-Quibén, Esther Bailón-García, **Abdalla Abdelwahab**, Francisco Carrasco-Marín and Agustín F. Pérez-Cadenas, Growing Tungsten Nanophases on Carbon Spheres Doped with Nitrogen. Behaviour as Electro-Catalysts for Oxygen Reduction Reaction. Materials, **2021**. 14(24).
- [13] Abdelrazek, G. M.; El-Deeb, M. M.; Farghali, A. A.; Pérez-Cadenas, A. F.; **Abdelwahab, A.**, Design of Self-Supported Flexible Nanostars MFe-LDH@ Carbon Xerogel-Modified Electrode for Methanol Oxidation. Materials **2021**, 14, (18).
- [12] Hamada H Kora, Mohamed Taha, **Abdalla Abdelwahab**, Ahmed A Farghali and S I El-dek. Effect of pressure on the geometric, electronic structure, elastic, and optical properties of the normal spinel MgFe₂O₄: a first-principles study. 2020 Mater. Res. Express 7 106101.
- [11] Khammar, H.; **Abdelwahab, A.**; Abdel-Samad, H. S.; Hassan, H. H., Synergistic performance of simply fabricated polyaniline/carbon xerogel composite as supercapacitor electrode. Journal of Electroanalytical Chemistry **2021**, 880, 114848.
- [10] A. Wasfey, M.; **Abdelwahab, A.**; Carrasco-Marín, F.; Pérez-Cadenas, A.F.; H Abdullah, H.; S. Yahia, I.; Farghali, A.A. Nickel Cobaltite Functionalized Silver Doped Carbon Xerogels as Efficient Electrode Materials for High Performance Symmetric Supercapacitor. *Materials* **2020**, 13, 4906.

- [9] A.A. Abdul Aleem , Elmorsy Khaled , Ahmed A. Farghali , **Abdalla Abdelwahab** , M.M. Khalil, β -Cyclodextrin/Carbon Xerogel Based Potentiometric Screen Printed Sensor for Determination of Meclofenoxate Hydrochloride, *Int. J. Electrochem. Sci.*, **2020**. 15: p. 3365-3381.
- [8] **Abdelwahab, A.**; Carrasco-Marín, F.; Pérez-Cadenas, A.F. Binary and Ternary 3D Nanobundles Metal Oxides Functionalized Carbon Xerogels as Electrocatalysts toward Oxygen Reduction Reaction. *Materials* **2020**, *13*, 3531.
- [7] **Abdelwahab, A.**, F. Carrasco-Marín, and A.F. Pérez-Cadenas, Carbon Xerogels Hydrothermally Doped with Bimetal Oxides for Oxygen Reduction Reaction. *Materials*, **2019**. 12(15): p. 2446.
- [6] **Abdelwahab, A.**, et al., Insight of the effect of graphitic cluster in the performance of carbon aerogels doped with nickel as electrodes for supercapacitors. *Carbon*, **2018**. 139: p. 888-895.
- [5] **Abdalla Abdelwahab**, Jesica Castelo-Quibén, José F. Vivo-Vilches, María Pérez-Cadenas, Francisco J. Maldonado-Hódar, Francisco Carrasco-Marín and Agustín F. Pérez-Cadenas "Electrodes Based on Carbon Aerogels Partially Graphitized by Doping with Transition Metals for Oxygen Reduction Reaction." (**2018**) *Nanomaterials* 8(4): 266.
- [4] Jesica Castelo-Quibén , **Abdalla Abdelwahab** , María Pérez-Cadenas , Sergio Morales-Torres, Francisco J. Maldonado-Hódar , Francisco Carrasco-Marín, Agustín F. Pérez-Cadenas, "Carbon - iron electro-catalysts for CO₂ reduction. The role of the iron particle size", *Journal of CO₂ Utilization* 24 (**2018**) 240–249.
- [3] M.M. EL-Deeb, W.M.A. El Rouby, **A. Abdelwahab**, A.A. Farghali, Effect of pore geometry on the electrocatalytic performance of nickel cobaltite/ carbon xerogel nanocomposite for methanol oxidation, *Electrochimica Acta*, **2018**. 259: p. 77-85.
- [2] **Abdalla Abdelwahab**, Jesica Castelo-Quibén, María Pérez-Cadenas, Abdelhakim Elmouwahidi, Francisco P. J. Maldonado-Hódar, Francisco Carrasco-Marín and Agustín F. Pérez-Cadenas, "Cobalt-Doped Carbon Gels as Electro-Catalysts for the Reduction of CO₂ to Hydrocarbons", *Catalysts* **2017**, 7(1), 25
- [1] Mohamed Abdellah, Rebecca Marschan, Karel Židek, Maria E. Messing, **Abdalla Abdelwahab**, Pavel Chábera, Kaibo Zheng, and Tõnu Pullerits, "Hole Trapping: The Critical Factor for Quantum Dot Sensitized Solar Cell Performance", *J. Phys. Chem. C*, **2014**, 118 (44), pp 25802-25808.