

Department of Chemistry

Faculty of Science

Benha university,

Egypt

E-mail: Mohamed.aborya@fsc.bu.edu.eg

maboriya@gmail.com



Mohamed Abd El-Rahman Mousa Abo-Riya
BSc, MSc, PhD

Personal Information:

Name: Mohamed Abd El-Rahman Mousa Abo-Riya

Date of Birth: 16/03/1973

Place of Birth: Shebien Elkanater, Kalubia, Egypt

Nationality: Egyptian

Religion: Moslem

Sex: Male

Mother language: Arabic

Other languages:

- English (very good in speaking, reading and writing).

Permanent address: Chemistry Department, Faculty of Science, Benha University, Benha-13518, Egypt.



Education:

- Bachelor of Science in Chemistry, **1996**, Benha University, Benha, Egypt (General Chemistry).
- Master of Science in Organic Chemistry, **2002**, Benha University, Benha, Egypt, under title "Utilization of Some Crude Oils in Preparation of Some Alkyd Resins and Polymer with Surface Active Properties".
- Ph.D. in Organic Chemistry, **2008**, Benha University, Benha, Egypt, under title "Preparation and characterization of surfactants from fatty derivatives "

Present and Previous Positions:

- Demonstrator at Chemistry Department, Faculty of Science, Benha University, Benha, Egypt, 1996-2002.
- Assistant Lecturer at Chemistry Department, Faculty of Science, Benha University, Benha, Egypt, 2002-2008.
- Lecturer at Chemistry Department, Faculty of Science, Benha University, Benha, Egypt, 2008-2016.
- Associate professor at Chemistry Department, Faculty of Science, Benha University, Benha, Egypt, 2016- up to now.

قائم بعمل عميد الكلية

رئيس مجلس قسم الكيمياء

ا.د. نهاد البرقى

ا.د. وجدى ابراهيم الدجج

Practical experiences and applications:

- 1) Synthesis of Novel organic heterocyclic compounds and its applications.
- 2) Synthesis of new families of surfactants
- 3) Physical and thermodynamic performance of surfactants.
- 4) Application of surfactants in large areas of science such Removing Thin Oil Slicks from Water Surface, corrosion inhibitors.

Research administration:

- Instituto de Química Avanzada de Cataluña, **CSIC (Department of Chemical and Surfactant Technology), Barcelona, Spain.**

Google Scholar:

<https://scholar.google.com/citations?user=9l42KtAAAAAJ&hl=ar>

Citation indices

Citations	494
h-index	8
i10-index	8

Research gate:

<https://www.researchgate.net/profile/Mohamed-Abo-Riya>

h-index	8
Citations	444
RI score	276.6

Awards and Recognition:

Award for excellence in scientific research from Benha University for the academic years 2016, 2017, 2018, 2023 in International Publishing.

Participation in conferences and workshops:

1. International Conference on Chemistry and the Environment I. Military Technical College in Cairo in 2002.
2. 13th Ibn Sina International Conference on Pure and Applied Heterocyclic Chemistry, from 14 to 17 February 2015. Hurgada city- Egypt, organized by Sohag University (oral presentation). " Novel Petroleum-Collecting and Dispersing Complexes Based on Linoleic acid and nitrogenous Bases for Removing Thin Petroleum Films from Water Surface"
3. International Conference for Chemistry and its Applications - Sohag University - held in Alexandria from 6-9 Aug 2016 (poster presentation).. " Novel Cationic Gemini Surfactants Based On Hydrazide Derivatives; Synthesis, Surface and Petroleum Properties".
4. 3rd Scientific Conference entitled Applied Science and Climate Change Challenges, October 8-9, 2022, Faculty of Science, Benha University, Egypt. **As a reviewer**

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ا.د. نهاد البرقى

ا.د. وجدى ابراهيم الدجج

Supervision of Master and Ph.D. Theses:

I have been supervising about 20 Master students 10 of them were awarded and 2 PhD students were granted.

List of Publications:

- 1- M.M. Azab, W.I.A. EldougDoug, **Mohamed Abo-Riya**, A.F. Shaaban and A.A. Elsayy, Synthesis and evaluation of modified alkyd resin from crude rice bran oil, 1st International conference on chemical engineering, Military Technical College, 44-59, 2002.
- 2- **Mohamed Abo-Riya**, Ahmed H. Tantawy, Wagdy El-DougDoug, "Synthesis and evaluation of novel cationic gemini surfactants based on Guava crude fat as petroleum-collecting and dispersing agents", *Journal of Molecular Liquids*, 221 (2016) 642-650. <http://dx.doi.org/10.1016/j.molliq.2016.05.083>.
- 3- Hany M. Abd El-Lateef1, **Mohamed Abo-Riya**, Ahmed H. Tantawy, "Empirical and quantum chemical studies on the corrosion inhibition performance of some novel synthesized cationic gemini surfactants on carbon steel pipelines in acid pickling processes", *Corrosion Science*, 108 (2016), 94-110. <http://dx.doi.org/10.1016/j.corsci.2016.03.004>.
- 4- Ismail Aiad, **Mohamed Abo-Riya**, Salah M. Tawfik, Mahmoud A., Abousehly, "Synthesis, surface properties and biological activity of N,N,N-tris(hydroxymethyl)-2-oxo-2-(2-(2-(alkanoyloxy)ethoxy)ethoxy)ethanaminium chloride surfactants", *Egyptian Journal of Petroleum* 25 (2016) 299. <http://dx.doi.org/10.1016/j.ejpe.2015.07.020>.
- 5- Wagdy Ibrahim A. El-DougDoug, **Mohamed Abo-Riya**, Basma A. Mahy, "synthesis and surface active properties of sulfonated acrylate esters based on Al-Cedre oil", *Journal of Surfactants and Detergents*, 18 (2015) 681-688. <http://dx.doi.org/10.1007/s11743-015-1695-5>.
- 6- L. Tavano, A. Pinazo, **Mohamed Abo-Riya**, M.R. Infante, M.A. Manresa, R. Muzzalupo, L. Pérez, "Cationic vesicles based on biocompatible diacyl glycerol-arginine surfactants: Physicochemical properties, antimicrobial activity, encapsulation efficiency and drug release", *Colloids and Surfaces B: Biointerfaces*, 120 (2014) 160-167. <http://dx.doi.org/10.1016/j.colsurfb.2014.04.009>.
- 7- Abdel-Monem. M. F. Eissa, Kouser. A. Hebash, **Mohamed Abo-Riya** and Sherif. I. M. Ramadan, "Synthesis and reactivity of 6-Iodo-4H-3,1-benzoxazin-4-one towards nitrogen nucleophiles and their antimicrobial activities", *Chemical and Process Engineering Research*, 15 (2013) 327-334.
- 8- L. Tavano, M. R. Infante, **Mohamed Abo-Riya**, A. Pinazo, M. P. Vinardell, M. Mitjans, M. A. Manresagand L. Perez, "Role of aggregate size in the hemolytic and antimicrobial activity of colloidal, solutions based on single and gemini surfactants from arginine", *Soft Matter*, 9 (2013) 306-319. <https://doi.org/10.1039/C2SM26670A>.
- 9- Eissa A.M.F., **M. Abo Riya** and Shereen M. Amin, "Synthesis and evaluation of anionic, amphoteric and cationic surfactants derived from mono succinate ester", *Egyptian Journal of Applied Science* 27 (2011) 809.
- 10- Ismail Aiad, **Mohamed Abo-Riya**, Salah M. Tawfik, and Mahmoud A. Abousehly, "Protection of carbon steel against corrosion in hydrochloric acid solution by some synthesized cationic surfactants", *Protection of Metals and Physical Chemistry of Surfaces*, 2016, 52, 339-347. <https://doi.org/10.1134/S2070205116020027>.

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- 11- **Mohamed A. Abo-Riya**, Hamdy A. Zahran, E.A.A. Hendawy, Ahmed H. Tantawy, Hany I. Mohamed, "Palm kernel oil mucilage as a source of bio-based cationic surfactants for effective control of water surface pollution: Synthesis, surface activity and petroleum capacities", *Journal of Molecular Liquids*, 386 (2023) 122478. <https://doi.org/10.1016/j.molliq.2023.122478>.
- 12- **Mohamed A. Abo-Riya**, Laila M. Reda, Ahmed H. Tantawy, Amal M. Metwally, "Novel cationic copolymeric surfactants bearing imidazole moiety as petro-dispersing / petro-collecting agents: Synthesis, surface activity and characterization", *Journal of Molecular Liquids*, 364 (2022) 120057. <https://doi.org/10.1016/j.molliq.2022.120057464>.
- 13- Kyriillos Roshdy, Hany I. Mohamed, Mohamed H. Ahmed, Wagdy I. El-DougDoug, **Mohamed A. Abo-Riya** "Gemini ionic liquid-based surfactants: Efficient synthesis, surface activity, and use as inducers for the fabrication of Cu₂O Nanoparticles" *RSC Advances*, 13 (2023) 31128.
- 14- **Mohamed A. Abo-Riya**, Sharbat A. Baker, "Novel synthesized anionic gemini and monomeric surfactants bearing sulphonate group as petro-dispersing/collecting agents: Design, characterization and surface-active properties", *Journal of Molecular Structure*, 1274 (2022) 134502. <https://doi.org/10.1016/j.molstruc.2022.134502>.
- 15- Ahmed H. Tantawy, **Mohamed A. Abo-Riya**, Samia M. Abdallah, Wagdy El-DougDoug, "Novel cationic surfactants based on waste frying oil for cleaning water surface from petroleum films: Synthesis, antimicrobial and surface properties", *Journal of Molecular Liquids*, 253 (2018) 36. <https://doi.org/10.1016/j.molliq.2018.01.009>.
- 16- Hany M. Abd El-Lateef , Ahmed H. Tantawy, Kamal A. Soliman, Salah Eid and **Mohamed A. Abo-Riya**, "Novel Imine-Tethering Cationic Surfactants: Synthesis, Surface Activity, and Investigation of the Corrosion Mitigation Impact on Carbon Steel in Acidic Chloride Medium via Various Techniques", *molecules*, Molecules 28 (2023) 4540. <https://doi.org/10.3390/molecules28114540>.
- 17- Kamal Shalabi, Hany M. Abd El-Lateef, Mohamed M. Hammouda, Amany M. A. Osman, Ahmed H. Tantawy and **Mohamed A. Abo-Riya**, "Perspectives on Corrosion Inhibition Features of Novel Synthesized Gemini-Fluorinated Cationic Surfactants Bearing Varied Spacers for Acid Pickling of X60-Steel: Practical, and In Silico Calculations", *Materials*, 16 (2023) 5192. <https://doi.org/10.3390/ma16145192>.
- 18- M. Eldesouki, Z. L. Abo-Shanab, M. El-Shafie, **M. Abo-Riya**, S. A. El-Kholy, "Fabrication and evaluation of novel sulfur/epoxy resin composites", *Polymer Bulletin*, 80 (2023) 12047. <https://doi.org/10.1007/s00289-022-04641-0>.
- 19- MM. Salim, M.M. Azab, **Mohamed A. Abo-Riya**, M. Abd-El-Raouf, N.M. EL Basiony, "Controlling C-steel dissolution in 1 M HCl solution using newly synthesized p-substituted imine derivatives: Theoretical (DFT and MCs) and experimental investigations", *Journal of Molecular Structure*, 1274 (2023) 134357. <https://doi.org/10.1016/j.molstruc.2022.134357>.
- 20- Jonas Nilsson, Gunnar Brinkmalm, Sherif Ramadan, Lisa Gilborne, Fredrik Noborn, Kaj Blennow, Anders Wallin, Johan Svensson, **Mohamed A. Abo-Riya**, Xuefei Huang & Göran Larson, "Synthetic standard aided quantification and structural characterization of amyloid-beta glycopeptides enriched from cerebrospinal fluid of Alzheimer's disease patients", *Scientific Reports*, 9 (2019) 5522. <https://doi.org/10.1038/s41598-019-41897-5>.

- 21- M. A. Mohamed, R. R. Khattab, A. A. F. Wasfy, **M. A. Abo-Riya**, S. El-Kalyoubi, and N. A. Hassan, "Synthesis and Anticancer Activity Evaluation of Some Thienopyrimidine Derivatives", *Russian Journal of Bioorganic Chemistry*, 47 (2021) 1312. <https://doi.org/10.1134/S1068162021060194>.
- 22- Mohammed Eldesouki, Zeinab abo-shanab, Mohammed Mohammedy, Mohamed Elshafie, **Mohamed Abo Riya**, Sanaa Elkholy, "Evaluation of the dynamic mechanical analysis, water absorption and chemical resistance properties of sulfur/epoxy composites", *Egyptian Journal of chemistry*, 64 (2021) 107. <https://doi.org/10.21608/EJCHEM.2020.35160.2729>.
- 23- W.I. El-DougDoug, **M. Abo-Riya**, M.M. Azab, A.A. El-Sawy and M.A. Elnaggar, "Synthesis and Evaluation of Surface Properties of Anionic Surfactants Based on Fatty Matter of Egyptian Peach Kernel", *International Journal of Applied Chemistry*, 7 (2020) 13. <https://doi.org/10.14445/23939133/IJAC-V7I2P103>.
- 24- E. Habeb, Wagdy I. A. El-DougDoug, M.A. Abbas, **Mohamed Abo-Riya** and Z. Elbially, "Synthesis of Ionic Liquid based on Poly Vinyl Pyrrolidone as corrosion inhibitor of carbon steel in Aqueous Media" *Journal of Basic and Environmental Sciences*, 7 (2020) 34.
- 25- A.A.Aly, **M.A.Abo-Riya**, A.A.El-Shiekh and Aya.I.Elkala, "Synthesis and biological evaluation of new series of phthalazinone, pyridazinone, oxadiazole, pyrazolone scaffolds based on coumarin-3-carbohydrazide", *Benha Journal Of Applied Sciences*, 7 (2022) 21.

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