

# CURRICULUM VITAE

For

## Dr. Sahar Hassona Hassan El-Khalafy Professor of Organic Chemistry



Work Address: Tanta University, Faculty of Science,  
Department of Chemistry, Tanta, P.O. 31527. EGYPT.  
E-mail: saharelkhalfy@hotmail.com

Tel. (work) +2-040 334 4352 Ext. 525  
Tel. (mobile) +2-01007276665  
Fax: +2-040 335 0804

### Academic Degrees:

- B. Sc. Degree in Chemistry, very good, Tanta University, Egypt, 1992.
- M. Sc. Degree in Organic Chemistry, Tanta, University, Egypt, 1997.
- Ph. D in Organic Chemistry, Tanta University, Egypt, 2003.

### Academic Positions and Experience:

- Demonstrator at the Chemistry Department, Tanta University, Egypt, (1992- 1997).
- Assistant Lecturer at the Chemistry Department, Tanta University, Egypt, (1997-2003).
- Lecture at the Chemistry Department, Tanta University, Egypt, (2003-2014)
- Assistant Professor at the Chemistry Department, Tanta University, Egypt (2014-2024).
- Professor at the Chemistry Department, Tanta University, Egypt (2024-up to date).
- Equivalency program coordinator (double major) faculty of science (2023- up to date)

### Sabbatical Leaves:

- Visiting research at Department of Chemistry and Biochemistry, University of Maryland , College Park (USA) with Professor Michael P Doyle from January (2006) to June (2006).
- Visiting Scholar at Department of Chemistry and Chemical Biology, Rutgers University, The state of New Jersey (USA) with Professor Alan S Goldaman from July (2008) to September (2009).
- Head of chemistry department at Sinai University (2017-up to date)

## Research Interest:

- Preparation of new Porphyrins and their transition metal complexes.
- Preparation of new polymer-supported reagents and catalysts.
- Study of the catalytic activities of these compounds in the oxidation reactions of organic compounds.
- Study the activity of Dirhodium (II) caprolactamate catalyst in the oxidation of phenols and degradation of some azo dye.
- Synthesis and design of new tridentate ligands and iridium complexes and their application in Alkane Metathesis.
- Preparation of Metal–Organic Framework (MOFs) and Nano composite and studying their application in chemistry.

## Activities:

- Member in the project (Application of Transition Metal Complexes Supported on Polymers and Clay in Decontamination of Water from Toxic Organic Chemicals). Financial Support by Tanta University Research Fund.
- Member in of the American Chemical Society in Washington, D.C.
- Awarded more than 18 Tanta University award for my publications in international journals with high impact factors.

## Conference:

- Seventh International Conference on the Chemistry and its role in development. April 14-17 , 2003, at faculty of science, Mansoura College.
- 238th ACS National Meeting & Exposition. August 16-20, 2009. Washington, D.C.
- Thescientificcommitteeoffourthsaudiscienceconference(21stto24thofmarch, 2010, at Al-Madinah Al-Munawwarah, kingdom of saudi arabia).
- The2ndSeminaronPracticalPhysicalChemistry(SPPC)forseniorundergraduate students of chemistry. April 27, 2013, at faculty of science, Tanta University.
- The first conference for Postgraduate students of science (PSS 2013), April 30, 2013, at faculty of science, Tanta University.
- The 15th Arab International Conference on Material Science. Alexandria, Egypt, 2-4 December 2014.

- International Conference on Chemical Sciences & Applications 6-9 Aug 2016, Alex. Egypt
- Recent trends in chemistry 2017. Hurghada, Egypt. (25-28 April 2017).
- Recent trends in chemistry 2021. Sharm El-Sheikh, Egypt. (1-4 October 2021).
- The 5th Tanta University International Environment Forum, Tanta University. Egypt (October 2022).

### Reviewer for Journals:

- 1) Environmental Progress & Sustainable Energy.
- 2) Catalysis Letters.

### List of Publications:

- 1-Catalytic activity and stability of anionic and cationic water soluble Cobalt (II) tetraarylporphyrin complexes in the oxidation of 2- mercaptoethanol by molecular oxygen. M. Hassanein, S. Gerges, M. Abdo and S. El-Khalafy. *J. Mol. Catal. A: Chem.*, 204, 22-26 (2005).
- 2- Studies on the oxidation of 2, 6-di-tert-butylphenol by molecular oxygen catalyzed by cobalt (II) tetraarylporphyrin bound to cationic latex. Mahmoud T. Hassanein, Shady S. Gerges, Mohamed M. Abdo and Sahar H. El-Khalafy. *J. Porphyrins and Phthalocyanines*, 9, 621-625 (2005).
- 3- Autoxidation of 2,6-di-tert-butylphenol catalyzed by 5, 10, 15, 20-tetrakis[4-(diethylmethylammonio)phenyl] porphyrinatocobalt (II)tetraiodide in water. M. Hassanein, S. Gerges, M. Abdo and S. El-Khalafy. *J. Mol. Catal. A: Chem.*, 268, 24-28 (2007).
- 4- Study of the oxidation of 2-aminophenol by molecular oxygen catalyzed by cobalt (II) phthalocyaninetetrasodiumsulfonate in water. M. Hassanein, M. Abdo, S. Gerges, and S. El-Khalafy. *J. Mol. Catal. A: Chem.*, 28,53-56 (2008).
- 5- Efficient Heterogeneous Dual Catalyst Systems for Alkane Metathesis. Zheng Huang, Eleanor Rolfe, Emily C. Carson, Maurice Brookhart, Alan S. Goldman, Sahar H. El- Khalafy, Amy H. Roy MacArthur. *Journal: Advanced Synthesis & Catalysis*, 352, 125- 135 (2010).
- 6- Dirhodium-Catalyzed Phenol and Aniline Oxidations with T-HYDRO. Substrate Scope and Mechanism of Oxidation. Maxim O. Ratnikov,† Linda E. Farkas, Emily C. McLaughlin, Grace Chiou, Hojae Choi, Sahar H. El-Khalafy, and Michael P. Doyle. *J. Org. Chem.*, 76 (8), pp 2585–2593( 2011).

- 7- Degradation of azo dye with dirhodium(II) caprolactamate as heterogeneous catalyst .  
Abeer S. Elsherbiny, Sahar H. El-Khalafy and Michael P. Doyle. *J. Water Science & Technology*. 65(12), 2175–2182 (2012). Water
- 8- Oxidation of 2-aminophenol with molecular oxygen and hydrogen peroxide catalyzed by water soluble metalloporphyrins. Sahar H. El-Khalafy, M. Hassanein, *Journal of Molecular Catalysis A: Chemical* 363– 364 (2012) 148– 152
- 9- 5,10,15,20-Tetrakis-(4-sulfonatophenyl)porphyrinatocobalt(II) supported on ion exchange resin as reusable and effective catalyst for the oxidative coupling of 2-amino-phenol to 2-aminophenoxazine-3-one. M. Hassanein \* , S. El-Khalafy, S. Shendy. *Catalysis Communications* 40 (2013) 125– 128
- 10- Oxidative coupling of 2-aminophenol to 2-amino-phenoxazine-3-one catalyzed by organotin (IV)–copper (I) cyanide coordination polymers as heterogeneous catalysts. Sahar H. El-Khalafy\*, Mahmoud T. Hassanein, Safaa El-din H. Etaiw, Ahmed S. Badr El-Din. *Arabian Journal of Chemistry*, In Press, Corrected Proof, Available online 21 November 2013
- 11- Rapid Induced Aggregation of Gold Nanoparticles by Diolefinic Dyes. Ahmed A Abo-Alhasan, Samy A El-Daly, Morad M El- Hendawy, Sahar H El-Khalafy and El- Zeiny M Ebeid. *Journal of Nanomaterials & Molecular Nanotechnology* 3(2014) 2-7.
- 12- Activity of Mixed Valence Copper Cyanide Metal–Organic Framework in the Oxidation of 3,5-di-Tert-Butylcatechol with Hydrogen Peroxide, M. Hassanein ,Safaa El- din H. Etaiw , Sahar H. El-Khalafy , Mohamed M. El bendary, *J. Inorg. Organomet. Polym.* (2015) 25:664– 670.
- 13- Selective oxidation of 2-naphthol to 2-hydroxy-1,4-naphthoquinone with hydrogen peroxide catalyzed by 5,10,15,20-tetrakis(p-sulfonatophenyl) porphyrinatomanganese(III) chloride in aqueous solution. M. Hassanein, S. El-Khalafy, S. Shendy, *Catalysis Communications*. (2017) 97: 134-137.
- 14- Oxidation of azo dye Orange II with hydrogen peroxide catalyzed by 5,10,15,20- tetrakis [4-(diethylmethylammonio)phenyl]porphyrinato cobalt (II)tetraiodide in aqueous solution. S.H. El-Khalafy, M.T. Hassanein, M.F. Abd-Elal, A.A. Atia, *Journal of Saudi Chemical Society* (2020) 24, 520–526
- 15- Catalytic activity of CuI/CuII cyanide based phenanthroline-bicarbonate system for enhancing aerobic oxidation of 2,6-di-tert-butylphenol. S. El-khalafy, S. El-din Etaiw, M. Hassanein. *Journal of Saudi Chemical Society* (2022) 26, 101466

- 16- Efficient Catalyst 5, 10, 15, 20-Tetraphenylporphyrinatocobalt(II) Complex for the Oxidation of 3,5-Di-tert-butylcatechol to the Corresponding Quinone with Molecular Oxygen. Sahar H. El-Khalafy, Mahmmoud.T. Hassanein and Samah A. Shendy. Egypt. J. Chem. Vol. 66.No. 10pp. 9-15 (2023)
- 17-Catalytic activity of Mn(III) porphyrin complex supported onto cross linked polymers in the green oxidation of malathion with hydrogen peroxide in aqueous solution Sahar H. El-Khalafy, Mahmoud T. Hassanein, Samia M. Elsigeny, Hazem F. Taha, Kamel R. Shoueir, El-Refaie S. Kenawy. Arabian Journal of Chemistry (2023) 16, 104969
- 18-Synthesis, Characterization, and Anticancer Potency of Branched Poly (p-Hydroxy Styrene) Schiff-Bases El-Refaie Kenawy, Sahar H. El-Khalafy, Hamed A. Abosharaf, Esraa M. El-nshar, Ahmed R. Ghazy, and Mohamed M. Azaam. Macromol. Biosci. 2023, 2300090
- 19- Efficient and green oxidation of 2-aminophenol catalyzed by tetra (-p-methoxyphenyl) porphyrin complexes anchored on chitosan in bicarbonate solution Sahar H. El-Khalafy, Mahmoud T. Hassanein, Ayat A. Mubarak. Chemical Papers, Accepted 2023
- 20-Catalytic activity of Co (II) porphyrin anchored onto polymeric support of electrospun poly acrylonitrile nanofiber: Synthesis and efficient green oxidation of crystal violet dye with hydrogen peroxide Sahar H. El-Khalafy, Mohamed M. Azaam, Esraa M. El-nshar, Elbadawy A. Kamoun, El-Refaie Kenawy. Biomass conversion and Biorefinery, Accepted 2023