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Institute/ University	King Saud University	College/ Directorate	Science		Department	Chemistry	
Nationality	Egypt	Date of Birth			Country of Birth	Egypt	
Languages	Arabic – English						
Highest Degree	PhD	Date of Graduation	1995				
University	Tanta University	Country	Egypt				
Academic Title	Associate Professor	Others (Specify)	1.				
			2.				
Major field	Organic Chemistry	Specialization field	Polymer Chemistry				
1.							
Current Research Interests(English)							
<p>Design and synthesis of functionalized polymers having diverse hydrophile-lipophile structure and their application on the following fields:</p> <p>a) Catalysis: Synthesis of polymer-supported reagents and catalysts for use in i- Use of polymer-supported reagents for the halogenations, thiocyanation, and reduction of organic compounds. ii- The oxidation of sterically hindered phenols as model of organic pollutants and for their industrial importance. iii- The oxidation of sulfur-containing compounds such as mercaptans as model of destructing chemical warfare agent and the MEROX petroleum sweetening. iv- Polymerization of ethylene and α-olefins (future project). v- Catalysts for conversion of naphtha to middle distillate range hydrocarbon for fuel application</p> <p>b) Removal of water pollutants: Use of functionalized polymers and polymer-bound magnetic nanoparticles, and ZVM for removal of heavy metals and phenolic compounds from industrial waste water.</p> <p>c) Synthesis of hydrogel and organogel polymers: Synthesis of hydrogel superabsorbent materials and organogel polymers for hydrocarbon absorption.</p> <p>d) Studies on biological activities of the polymer: Antimicrobial studies and free volume measurements.</p>							
Any additional information to be added							
<p>Qualification</p> <ol style="list-style-type: none"> Ph.D. in Organic Chemistry, May, 2005, Tanta University, Faculty of Science, Tanta 31527, Egypt. Tanta University, Egypt. (A Channel System with Oklahoma State University, Stillwater, OK, USA. Thesis title: Polymer colloids as catalyst support for oxidation of phenols & thiols).Channel system between Tanta University (Egypt) and Virginia Commonwealth University (USA). M.Sc. in Organic Chemistry, February 23, 1999, Tanta University, Faculty of Science, Tanta 31527, Egypt. The thesis entitled: "Polymer-Support Phase Transfer Catalysts". B.Sc. in Chemistry, May 1983, "Very good with honor degree", Tanta University, Faculty of Science, Tanta 31527, Egypt <p>Conferences</p> <p>2016, November 8-10. 6th International Conference on Chemistry, Riyadh, Saudi Chemical Society</p> <p>2014, May 26-27, KACST-Oxford Petrochemical Forume, Riyadh</p> <p>2013, November 10-13th : KAUST Polymer Conference: November 10-13th 2013, King Abdullah University for Science and Technology, Thuwal, Saudi Arabia. Synthesis and characterization of some polymeric chelates and their dual application in heavy metal removal and oxidation of some phenolic</p>							

compounds. Modhi Sanad Al-Enzi, Hany El-Hamshary, Salem S. Al-Deyab
2012, November 11–13: The 2nd **Saudi International Nanotechnology Conference (2SINC) 2012**, Riyadh
 King Abdulaziz City for Science and Technology (KACST), KACST Riyadh
2012, September 9–12 /2012: The 2nd KAST-Oxford Petrochemicals Forum 2012 “September 9–12/ 2012,
 Riyadh, King Abdulaziz City for Science and Technology (KACST), KACST Riyadh
2011, November 19-21: 4th **International Conference on Chemistry, Riyadh, Saudi Chemical Society**.
 Synthesis and catalytic application of novel polymer-clay nanocomposite reagents for oxidation and nucleophilic
 substitution of some organic compounds. H. El-Hamshary, A. I. Selim, N. A. Salahuddin, H. S. Mandour.

Projects

Current Projects:

1) Postdoc. Project title : “Preparation of Super Performance Continuous Carbon Filaments for Aircraft and Automobile Parts”

PI: Prof. Salem Al-Deyab

Project # : 11-NAN1915-02.

Funding Agent : The National Plan for Sciences & Technology (NPST), King Saud University, Saudi Arabia
Period : 2013 – 2015.

Joint project with Chonbuk National University, South Korea. (Prof. Hak Yong Kim).

2) Postdoc. Project title : “Development and Commercialization of Fuel Cells Based on Industrial and Sewage Waters Using Nanotechnological Approach”

PI: Dr. Mohamed El-Newehy

Project # : 11-ENE1917-02.

Funding Agent : The National Plan for Sciences & Technology (NPST), King Saud University, Saudi Arabia
Period : 2013 – 2015.

Joint project with Chonbuk National University, South Korea. (Prof. Nasser Barakat).

List of Publications:

1. Akelah, A., Selim, A., & El-Hamshary, H. (1988). Synthesis of pyridine and quinoline derivatives of poly (methyl methacrylate): Their uses as brominating agents. *European Polymer Journal*, 24(11), 1111-1114.
2. Hassanein, M., Akelah, A., Selim, A., & El Hamshary, H. (1989). Chemically modified poly (methyl methacrylate) resin-bound triphenyl-phosphonium bromide as halogen-carrier in the bromination of organic compounds. *European Polymer Journal*, 25(10), 1083-1085.
3. Hassanein, M., Akelah, A., Slim, A., & El-Hamshary, H. (1990). Preparation and Synthetic Application of Poly (vinylbenzyltriphenylphosphonium) Bound Borohydride, Nitrite and Thiocyanate Reagents. *Indian Journal of Chemistry, B.*, 29, 763-765.
4. Ford, W. T., Yu, H., Lee, J. J., & El-Hamshary, H. (1993). Synthesis of monodisperse crosslinked polystyrene latexes containing (vinylbenzyl) trimethylammonium chloride units. *Langmuir*, 9(7), 1698-1703.
5. Hassanein, M., Selim, A., & El-Hamshary, H. (1994). Oxidation of 2, 6-di-tert-butylphenol by molecular oxygen catalyzed by tetrasodium phthalocyaninatocobalt (II) tetrasulfonate bound to a polymer colloid. *Macromolecular Chemistry and Physics*, 195(12), 3845-3854.
6. Ford, W., El-Hamshary, H., Stefanitis, I., Spivey, H., Hassanein, M., & Selim, A. (1996). Autoxidation of 2-mercaptoethanol catalyzed by cobalt (II) phthalocyaninetetrasulfonate bound to cationic latexes. *New journal of chemistry*, 20(5), 549-557.
7. Al-Eed, M., Assubaie, F., El-Garawany, M., El-Hamshary, H., & ElTayeb, Z. (2002). Determination of heavy metal levels in common spices. *J Appl Sci*, 17, 87-98.
8. El-Hamshary, H., El-Garawany, M., Assubaie, F. N., & Al-Eed, M. (2003). Synthesis of poly (acrylamide-co-4-vinylpyridine) hydrogels and their application in heavy metal removal. *Journal of applied polymer science*, 89(9), 2522-2526.
9. El-Hamshary, H., & Assubaie, F. N. (2004). Aqueous Oxidation of 2, 6-Dimethylphenol with Hydrogen Peroxide Catalyzed by Transition Metal Complexes Supported on Polyvinylpyridinium Salts. *Journal of Macromolecular Science, Part A*, 41(2), 107-114.
10. El-Hamshary, H., & Al-Sigeny, S. (2004). Catalytic activities of amino acid modified, starch-grafted acrylamide for the decomposition of hydrogen peroxide. *Journal of applied polymer science*, 93(2), 630-636.
11. Hassanein, M., El-Hamshary, H., Salahuddin, N., & Abu-El-Fotoh, A. (2005). Oxidation of 2- mercaptoethanol catalyzed by cobalt (II) phthalocyaninetetrasulfonate supported on poly-N-alkyl-4-vinyl pyridinium/montmorillonite intercalates. *Journal of Molecular Catalysis A: Chemical*, 234(1), 45-50.
12. El-Hamshary, H., Al-Sigeny, S., & Ali, M. M. (2006). Synthesis and biological study of some amino acid

- functionalized starch-graft-polyacrylamide. *Carbohydrate polymers*, 64(2), 282-286.
13. Mahmoud, K., Al-Sigeny, S., Sharshar, T., & El-Hamshary, H. (2006). Positron annihilation study on free volume of amino acid modified, starch-grafted acrylamide copolymer. *Radiation Physics and Chemistry*, 75(5), 590-595.
 14. El-Hamshary, H. (2007). Synthesis and water sorption studies of pH sensitive poly (acrylamide-co-itaconic acid) hydrogels. *European Polymer Journal*, 43(11), 4830-4838.
 15. El-Hamshary, H., El-Sigeny, S., Taleb, M. F. A., & El-Kelesh, N. A. (2007). Removal of phenolic compounds using (2-hydroxyethyl methacrylate/acrylamidopyridine) hydrogel prepared by gamma radiation. *Separation and Purification Technology*, 57(2), 329-337.
 16. El-Hamshary, H., Al-Sigeny, S., & Ibrahim, M. M. (2010). Catalytic activity of polymer anchored Cu-tren complex in the oxidation of 2, 6-di-t-butyl phenol. *Journal of Macromolecular Science, Part A: Pure and Applied Chemistry*, 47(4), 329-334.
 17. El-Hamshary, H., & Assubaie, F. N. (2011). Synthesis of cationic and ampholytic starch graft acrylamide and their aqueous salt absorption. *Journal of Macromolecular Science, Part A*, 48(6), 454-461.
 18. El-Hamshary, H., El-Newehy, M. H., & Al-Deyab, S. S. (2011). Oxidation of phenol by hydrogen peroxide catalyzed by metal-containing poly (amidoxime) grafted starch. *Molecules*, 16(12), 9900-9911.
 19. Saafan, A. A., El-Hamshary, H., Abd-El-Aal, M. F., & Berber, M. R. (2012). Improved Graft Copolymerization of Some Modified Cellulose Polymers with Vinyl Monomers Using Dibenzoyl Peroxide (DBPO) as Initiator. *Journal of Macromolecular Science, Part A*, 49(7), 554-561.
 20. Meera Moydeen A., S. A. P. M., Hany El-Hamshary, Mohamed H. El-Newehy, & Al-Deyab, S. S. (2013). Synthesis, characterization and antimicrobial study of N-Mannich base and its complex. *Der Chemica Sinica*, 4(3), 93-99.
 21. Mo, X., Li, D., El-Hamshary, H. A., & Al-Deyab, S. S. (2013). Electrospun nanofibers for tissue engineering. *Journal of Fiber Bioengineering and Informatics*, 6(3), 225-235.
 22. Mo, X., Yuan, L., & El-Hamshary, H. A. (2013). *Dextran-Based Hydrogel as a Tissue Adhesive Agent and Tissue Engineering Scaffold*. In *Dextran: Chemical Structure, Applications and Potential Side Effects* (pp. 109-142): Nova Science Publishers, New York.
 23. El-Newehy, M. H., El-Hamshary, H., Al-Deyab, S. S., & Abdel-Megeed, A. (2014). Synthesis of quaternized amine-terminated polyacrylonitrile and their antimicrobial assessment. *Journal of Macromolecular Science, Part A*, 51(6), 527-537.
 24. El-Newehy, M. H., El-Hamshary, H., Alamri, A., & Al-Deyab, S. S. (2014). Synthesis and Modification of Amine-Terminated Maleic Anhydride-Ethylene Copolymers by Benzaldehyde Derivatives: Characterization and Antimicrobial Properties. *International Journal of Polymeric Materials and Polymeric Biomaterials*, 63(11), 563-575.
 25. Li, D., Wu, T., He, N., Wang, J., Chen, W., He, L., . . . Ke, Q. (2014). Three-dimensional polycaprolactone scaffold via needleless electrospinning promotes cell proliferation and infiltration. *Colloids and Surfaces B: Biointerfaces*, 121, 432-443.
 26. Li, H., Wu, T., Zheng, Y., El-Hamshary, H., Al-Deyab, S. S., & Mo, X. (2014). Fabrication and characterization of Mg/P(LLA-CL)-blended nanofiber scaffold. *Journal of Biomaterials Science, Polymer Edition*, 25(10), 1013-1027.
 27. Yin, A., Li, J., Bowlin, G. L., Li, D., Rodriguez, I. A., Wang, J., . . . Mo, X. (2014). Fabrication of cell penetration enhanced poly (L-lactic acid-co-ε-caprolactone)/silk vascular scaffolds utilizing air-impedance electrospinning. *Colloids and Surfaces B: Biointerfaces*, 120, 47-54.
 28. Zhang, J., Qiu, K., Sun, B., Fang, J., Zhang, K., El-Hamshary, H., . . . Mo, X. (2014). The aligned core-sheath nanofibers with electrical conductivity for neural tissue engineering. *Journal of Materials Chemistry, B.*, 2, 7945-7954.
 29. El-Hamshary, H., Fouda, M. M., Moydeen, M., & Al-Deyab, S. S. (2014). Removal of heavy metal using poly (N-vinylimidazole)-grafted-carboxymethylated starch. *International journal of biological macromolecules*, 66, 289-294.
 30. Chen, W., Li, D., El-Shanshory, A., El-Newehy, M., El-Hamshary, H., Al-Deyab, S. S., . . . Mo, X. (2015). Dexamethasone loaded core-shell SF/PEO nanofibers via green electrospinning reduced endothelial cells inflammatory damage. *Colloids and Surfaces B: Biointerfaces*, 126, 561-568.
 31. El-Hamshary, H., Fouda, M. M., Moydeen, M., El-Newehy, M. H., Al-Deyab, S. S., & Abdel-Megeed, A. (2015). Synthesis and antibacterial of carboxymethyl starch-grafted poly (vinyl imidazole) against some plant pathogens. *International journal of biological macromolecules*, 72, 1466- 1472.
 32. El-Hamshary, H., Selim, A. I., Salahuddin, N. A., & Mandour, H. S. (2015a). Clay-Polymer Nanocomposite-Supported Brominating Agent. *Clays and Clay Minerals*, 63(4), 328-336.

33. El-Hamshary, H., Selim, A. I., Salahuddin, N. A., & Mandour, H. S. (2015b). Synthesis and application of polymer–clay nanocomposite-supported dichromate oxidizing agent. *Polymer Composites*, 36(11), 2066-2075.
34. El-Shanshory, A. A., Chen, W., El-Hamshary, H. A., Al-Deyab, S. S., & Mo, X. (2015). Antibacterial ciprofloxacin hydrochloride incorporated PVA/regenerated silk fibroin nanofibers composite for wound dressing applications. *Journal of controlled release: official journal of the Controlled Release Society*, 213, e8.
35. Li, D., Pan, X., Sun, B., Wu, T., Chen, W., Huang, C., . . . Mo, X. (2015). Nerve conduits constructed by electrospun P (LLA-CL) nanofibers and PLLA nanofiber yarns. *Journal of Materials Chemistry B*, 3(45), 8823-8831.
36. Sun, B., Li, J., Liu, W., Aqeel, B. M., El-Hamshary, H., Al-Deyab, S. S., & Mo, X. (2015). Fabrication and characterization of mineralized P (LLA-CL)/SF three-dimensional nanoyarn scaffolds. *Iranian Polymer Journal*, 24(1), 29-40.
37. Wang, J., An, Q., Li, D., Wu, T., Chen, W., Sun, B., . . . Mo, X. (2015). Heparin and vascular endothelial growth factor loaded poly (L-lactide-co-caprolactone) nanofiber covered stent-graft for aneurysm treatment. *Journal of Biomedical Nanotechnology*, 11(11), 1947-1960.
38. Wu, T., Huang, C., Li, D., Yin, A., Liu, W., Wang, J., . . . Mo, X. (2015). A multi-layered vascular scaffold with symmetrical structure by bi-directional gradient electrospinning. *Colloids and Surfaces B: Biointerfaces*, 133, 179-188.
39. Zhan, J., Liu, J., Wang, C., Fan, C., El-Hamshary, H. A., Al-Deyab, S. S., & Mo, X. (2015). Electrospun silk fibroin–poly (lactic-co-glycolic acid) membrane for nerve tissue engineering. *Journal of Bioactive and Compatible Polymers: Biomedical Applications*, 0883911515602709.
40. Bhutto, M. A., Wu, T., Sun, B., Hany, E.-H., Al-Deyab, S. S., & Mo, X. (2016). Fabrication and characterization of vitamin B5 loaded poly (l-lactide-co-caprolactone)/silk fiber aligned electrospun nanofibers for schwann cell proliferation. *Colloids and Surfaces B: Biointerfaces*, 144, 108-117.
41. Bhutto, M. A., Zhang, J., Sun, B., El-Hamshary, H., Al-Deyab, S. S., & Mo, X. (2016). Development of poly (L-lactide-co-caprolactone) multichannel nerve conduit with aligned electrospun nanofibers for Schwann cell proliferation. *International Journal of Polymeric Materials and Polymeric Biomaterials*, 65(7), 323-329.
42. Chen, W., Chen, S., Morsi, Y., El-Hamshary, H., El-Newhy, M., Fan, C., & Mo, X. (2016). Superabsorbent 3D scaffold based on electrospun nanofibers for cartilage tissue engineering. *ACS Applied Materials & Interfaces*, 8(37), 24415-24425.
43. Chen, W., El-Hamshary, H., Al-Deyab, S. S., & Mo, X. (2016). A Method to Control Curcumin Release from PELA Fibers by Heat Treatment. *Advances in Polymer Technology*.
44. Chen, W., Ma, J., Zhu, L., Morsi, Y., Hany, E.-H., Al-Deyab, S. S., & Mo, X. (2016). Superelastic, superabsorbent and 3D nanofiber-assembled scaffold for tissue engineering. *Colloids and Surfaces B: Biointerfaces*, 142, 165-172.
45. El-Newehy, M. H., El-Naggar, M. E., Alotaiby, S., El-Hamshary, H., Moydeen, M., & Al-Deyab, S. (2016). Preparation of biocompatible system based on electrospun CMC/PVA nanofibers as controlled release carrier of diclofenac sodium. *Journal of Macromolecular Science, Part A*, 53(9), 566-573.
46. Li, D., Chen, W., Sun, B., Li, H., Wu, T., Ke, Q., . . . Mo, X. (2016). A comparison of nanoscale and multiscale PCL/gelatin scaffolds prepared by disc-electrospinning. *Colloids and Surfaces B: Biointerfaces*, 146, 632-641.
47. Sun, B., Wu, T., He, L., Zhang, J., Yuan, Y., Huang, X., . . . Mo, X. (2016). Development of Dual Neurotrophins-Encapsulated Electrospun Nanofibrous Scaffolds for Peripheral Nerve Regeneration. *Journal of Biomedical Nanotechnology*, 12(11), 1987-2000.
48. Sun, B., Wu, T., Wang, J., Li, D., Wang, J., Gao, Q., . . . Mo, X. (2016). Polypyrrole-coated poly (l-lactic acid-co-ε-caprolactone)/silk fibroin nanofibrous membranes promoting neural cell proliferation and differentiation with electrical stimulation. *Journal of Materials Chemistry B*, 4(41), 6670- 6679.
49. Yu, K., Zhou, X., Zhu, T., Wu, T., Wang, J., Fang, J., . . . Mo, X. (2016). Fabrication of poly (ester-urethane) urea elastomer/gelatin electrospun nanofibrous membranes for potential applications in skin tissue engineering. *RSC Advances*, 6(77), 73636-73644.
50. Yuan, L., Wu, Y., Fang, J., Wei, X., Gu, Q., El-Hamshary, H., . . . Mo, X. (2016). Modified alginate and gelatin cross-linked hydrogels for soft tissue adhesive. *Artificial cells, nanomedicine, and biotechnology*, 1-8.
51. Zeng, Z., Mo, X.-m., He, C., Morsi, Y., El-Hamshary, H., & El-Newehy, M. (2016). An in situ forming tissue adhesive based on poly (ethylene glycol)-dimethacrylate and thiolated chitosan through the Michael reaction. *Journal of Materials Chemistry B*, 4(33), 5585-5592.
52. Zhan, J., Morsi, Y., Ei-Hamshary, H., Al-Deyab, S. S., & Mo, X. (2016a). In vitro evaluation of electrospun gelatin–

- glutaraldehyde nanofibers. *Frontiers of Materials Science*, 10(1), 90-100.
53. Zhan, J., Morsi, Y., El-Hamshary, H., Al-Deyab, S. S., & Mo, X. (2016b). Preparation and characterization of electrospun in-situ cross-linked gelatin-graphite oxide nanofibers. *Journal of Biomaterials Science, Polymer Edition*, 27(5), 385-402.
54. Zhu, T., Yu, K., Bhutto, M. A., Wang, J., Shen, W., Song, W., . . . Mo, X. (2016). A facile approach for the fabrication of nano-attapulgite/poly (vinyl pyrrolidone)/biopolymers core–sheath ultrafine fibrous mats for drug controlled release. *RSC Advances*, 6(55), 49817-49823.