



YOUR NAME

CURRENT POSITION

PERSONAL INFORMATION	Full Name: Affiliations: Address: Mobile No.: E-mail: Important links:	Randa Eslah Khalifa Khalifa Ghonim Assistant professor ; Polymeric materials research department, advanced Technology and New Materials Research Institute (ATNMRI), City for Scientific Research and Technological Applications (SRTA-City). 3 Zewailst. Universities and Research Centres District; New Borg El Arab City, Alexandria, Egypt. Mobile No : +201282467520 Email: rghonim@srtacity.Sci.eg - randaghonim@gmail.com
EDUCATION	<ul style="list-style-type: none">• Ph.D.;in Chemical Engineering; 2016 Department of Chemical Engineering, Faculty of Engineering, Alexandria University.• M.Sc.;in Chemical Engineering; 2011 Department of Chemical Engineering, Faculty of Engineering, Alexandria University	

	<ul style="list-style-type: none"> • B.Sc.; in Chemical Engineering; 2006 Department of Chemical Engineering, Faculty of Engineering, Alexandria University
<p>ACTIVITIES</p>	<p>Scientific Activities</p> <ul style="list-style-type: none"> • Lecture Teaching polymer synthesis process course at the Department of Chemical Engineering, Diploma program, Faculty of Engineering, Alexandria University, 2019. • Assistant Supervisor Assisted in supervising graduate projects for the undergraduate students in the Chemical Engineering Department and Gas and Petrochemical Engineering Department, Faculty of Engineering, Alexandria University, since September 2016 and until now. <p><u>List of Graduation Projects</u></p> <ol style="list-style-type: none"> 1. Preparation, characterization and evaluation of novel nanocomposite poly electrolyte membranes (PEMs) for direct methanol fuel cell applications, 2016/2017. 2. Removal of methylene blue dye from industrial wastewater by porous functionalized magnetic cellulose acetate beads: Isotherms, kinetics and thermodynamic study, 2016/2017. 3. Adsorption of heavy metals by innovative magnetic mesoporous silica/carboxymethyl cellulose nanocomposite, student group in Chemical Engineering department, 2016/2017. 4. Optimization of MB sorption on modified carboxymethyl cellulose/activated montmorillonite Nanocomposite films; Kinetics,

isotherms, and thermodynamic study, 2017/2018.

5. Fabrication of novel cellulose nanoparticles based derivatives for cationic and anionic dye removal from wastewater, 2017/2018.
6. Development of novel cellulose schiffbase from waste newspapers for oil spill removal, 2018/2019.
7. Molding of the adsorption of drugs by functionalized cellulose aerogel/GO nanocomposite, 2018/2019.

- **Summer Schools Training course**

Head of the SRTA City Summer Schools for the undergraduate students entitled "Natural Polymers for Wastewater Treatment Applications" From 7 July 2019 to 18 July 2019.

- **Organizing member**

Help in organizing a workshop entitled "Electrospinning Technique: From Fundamental into Nanotechnological Application", organized by City for Scientific Research and Technological Applications (SRTA-City), New Material and Advanced Technology Institute, 10 April 2018.

- **Conferences**

1. Khalifa, R. E.; Abd Elmageed, M. H.; Omer, A. M.; Tamer, T. M., "Innovative magnetic mesoporous silica/carboxymethyl cellulose nanocomposite for heavy metals removal from industrial wastewater ", the 17th Arab International Conference on Materials Science "Materials for Novel Applications" At the Main conference hall at the Institute of Graduate studies and Research (IGSR), 18-20 December 2017. (poster)
2. Fabrication of a novel chitosan Schiff bases hydrogel derivatives for the adsorption of dyes from aqueous solution: kinetic, isotherm, and

thermodynamic studies., the International Conference on recent trends in chemistry, ICRTC, Hurghada, Egypt, 25-28 April 2017.

(poster)

3. Preparation, characterization and evaluation of novel nano composite TiO₂/ phosphorylated cellulose acetate membranes for direct methanol fuel cell applications., the 16th Arab International Conference on Materials Science "Materials and Society" At the Main conference hall at the Institute of Graduate studies and Research (IGSR), 3-5 December 2016. (poster)
4. Natural phosphate ore derivatives for the removal of toxic heavy metals from industrial effluents., the 15th Arab International Conference on Materials Science "Materials for Water Applications" At the Main conference hall at the Institute of Graduate studies and Research (IGSR), 2-4 December 2014. (poster)
5. International Conference (Bio-vision), Library of Alexandria, Alexandria, Egypt, 7-9 April, 2014.
6. Water and Sanitation in Africa and the Middle East Conference, Library of Alexandria, Alexandria, Egypt, 28 - 29 October 2013.
7. The First International (Water Biotech) Conference, National Research Center (NRC) Cairo, Egypt, 9-11 October 2012.

• **Workshops**

1. Workshop at Scientific Research Academy "U.S. Egypt- Higher Education Initiative Graduatescholarships for Professionals", 15 April 2018.
2. Electrospinning Technique: From Fundamental into Nanotechnological Application workshop organized by City for Scientific Research and Technological Applications (SRTA-City), New Material and Advanced Technology Institute, 10 April 2018.
3. Workshop at the British University in Egypt, Auditorium "the Nanotechnology Summit", Wednesday 14 March 2018.

4. First Training Seminar on "Bring your research to internationalization", Bibliotheca Alexandria, Egypt, 27-28th February 2018.
5. Workshop at the City for Scientific Researches and Technological Applications (SRTA- City) "Towards a good research" that organized by Plant Production Department, Arid Lands Cultivation Research Institute, Jan 4th 2017.
6. Workshop of the "1st Environment and Natural Materials Research Institute (ENMRI), International Workshop of Environment: Challenges and Solutions" was organized by (ENMRI) department and Center for Special Studies and Programs (CSSP), Bibliotheca Alexandria, April 5th 2016.
7. Workshop on Research Ethics: Basics and Principals organized by City for Scientific Research and Technological Applications (SRTA-City), March 29th 2016.
8. Workshop on Nanotechnology and its Biological Applications organized by City for Scientific Research and Technological Applications (SRTA-City), Genetic Engineering and Biotechnology Research Institute (GEBRI), April 20 2015.
9. Workshop on Waste Water reuse in Agriculture Held Parallel with "The Annual International Conference" of the High institute of public health- Alexandria University" Challenges Facing Health", 7-8th November 2012.
10. Workshop at Bibliotheca Alexandria about "Scientific Innovations in Egypt: Generations meeting." 16 October 2014.
11. Workshop at the City for Scientific Researches and Technological Applications (SRTA- City) that organized by the Scientific Supports and Projects Section, Bibliotheca Alexandria about (How to write review?), 15-17 June 2014.

Administrative Activities

List your Administrative Activities here...

(Activity Title, Description & Date)

Extra-curriculum Activities

- **PhD thesis supervision**

1. Preparation and characterization of modified chitosan hydrogel for drug delivery applications, PhD. Department of Chemistry, Faculty of Science-Alexandria University (Running 2019).
2. Development of hydrogel bio-polymer and their application as smart drug delivery systems PhD. Department of Chemistry, Faculty of Science-Alexandria University (Running 2019).
3. Fabrication and electrochemical properties of ion exchange membranes from industrial wastematerial for energy application. PhD. Chemical Engineering Department, Faculty of Engineering Minya University (Running 2018).
4. Preparation and application of outstanding proton conducting films for fuel cell applications, PhD. Chemical Engineering Department of Chemistry, Faculty of Engineering-Alexandria University (Running 2018).
5. Preparation, characterization, and evaluation of grafted nanocomposite membranes for proton exchange membrane fuel cells, PhD. Chemical Engineering Department of Chemistry, Faculty of Engineering-Alexandria University (Running 2018).

- **MSc thesis supervision**

1. Fabrication and evaluation of recyclable waste materials for oil spill cleanup, M.Sc. in Chemical Engineering Department, Faculty of Engineering-Alexandria University (Finished).

2. Preparation and characterization of magnetic polymeric nanoparticles for water purification applications, M.Sc. in Department of Chemistry, Faculty of Science, Al- Azhar University(Finished).

- **Projects**

1. Co-Principal investigator; Industrial waste water treatment using local materials and organic polymer (Case study : HORUS - EDFU factory for paper manufacturing, (STDF), Faculty For Factory Program (FFF)) Grant, ID : **(42702)**, Egypt (2020).
2. Co-Principal investigator; Recycling of old sea water membranes in brackish water desalination, surface water, and agricultural drainage water purification, STDF Grants National Challenge Projects, Under Evaluation, Egypt (2019).
3. **Member**; Development of smart superabsorbent polymeric hydrogels as conditioners for sandy soil, STDF Basic & Applied Research Grants; Egypt (2019).
4. **Member**; Development of polymer electrolyte membranes for fuel cell applications, STDF Basic & Applied Research Grants; Egypt (2014), Finished.

- **Reviewer in peer-reviewed journals**

1. Alexandria Engineering Journal.
2. Advances in Polymer Technology Journal.
3. Polymer Bulletin.
4. Journal of Applied Polymer Science.

- **Membership of Scientific Societies**

1. The Arab Society of Material Science.
2. Arab Center for Nanotechnology.

<p>GRANTS & AWARDS</p>	<p>List your Grants here...(start with the most recent) (Grant's Name – Date – Location)</p> <hr/> <p>Awards</p> <ul style="list-style-type: none"> • Presentation Competition Award <p>My undergraduate project team in Gas and Petrochemical Engineering Department, Faculty of Engineering, Alexandria University, Won the second place in the 4th ASEC (Annual student energy conference) 2017, in Zagreb, Croatia, in the presentation competition with a paper entitled “Fuel Cell Technology” from their graduation project.</p>
<p>LIST OF PUBLICATIONS</p>	<ol style="list-style-type: none"> 1. A.M.Omer, Gehad S. Elgarhy, Gehan M. El-Subruiti, Randa E. Khalifa, Abdelazeem S. Eltaweil, Fabrication of novel iminodiacetic acid-functionalized carboxymethyl cellulose microbeads for efficient removal of cationic crystal violet dye from aqueous solutions. International Journal of Biological Macromolecules, 148 (2020)1072-1083. 2. Omer, A.M., Tamer, T.M., Abou-Taleb, W.M. Roston, G.D., Hafez, A.M., Shehata, E.F., Khalifa, R.E. Mohyeldin, M.S. Zinc oxide nanoparticles development using phosphorylated alginate template matrix for water treatment applications: I. removal of methylene blue dye. Desalination and Water Treatment, Volume 174, January 2020, Pages 376-388. 3. Ahmed M. Omer, Randa E. Khalifa, Tamer M. Tamer, Ahmed A. Ali, Yossry A. Ammar, Mohamed S. Mohy Eldin. Kinetic, equilibrium and thermodynamic studies for the sorptive removal of crude oil spills using a low cost chitosan-poly (butyl acrylate) grafted copolymer. Desalination and Water Treatment (accepted 2020). 4. Ahmed Mohamed Omer, T.M Tamer, Abou-Taleb, W.M. Roston, G.D., Hafez, A.M., Shehata, E.F., Khalifa, R.E. Mohyeldin. Development of iron oxide nanoparticles using alginate hydrogel template for chromium (VI) ions removal. Desalination and water treatment, January (2020). 175:229-243. 5. Abdelazeem S. Eltaweil, Eman M. Abd El-Monaem, Ahmed M. Omer, Randa E. Khalifa, Mona M. Abd El-Latif, Gehan M. El-Subruiti. Efficient removal of

- toxic methylene blue (MB) dye from aqueous solution using a metal-organic framework (MOF)MIL-101(Fe): Isotherms, kinetics and thermodynamic studies. *Desalination and Water Treatment* 189 (2020) 395–407.
6. A.E.M. Mekky, M.M. El-Masry, R.E. Khalifa, A.M. Omer, T.M. Tamer, Z.A. Khan, M. Gouda, M.S. Mohy Eldin, Removal of methylene blue dye from synthetic aqueous solutions using dimethylglyoxime modified amberlite IRA-420: kinetic, equilibrium and thermodynamic studies, *Desalination and Water Treatment*, 181 (2020) 399–411.
 7. R. E. Khalifa, A. Ghozlan, H. Abd El-Wahab., "Fabrication of magnetic acrylic acid-co-butyl methacrylate nanocomposite for adsorptive removal of methylene blue from aqueous solutions", *Egyptian Journal of Chemistry*, In press, 2020.
 8. M.S. Mohy Eldin, E. Fadl, A.M. Hafez, R. E. Khalifa, A.M. Omer, T. M. Tamer, G. Daniel., "Chromium (VI) Ions Separation using Iron Oxide Nanoparticles Developed by Alginate Hydrogel Template", *Desalination and Water Treatment*, In press, 2020.
 9. M. Elmasry, A.M. Omer, T. M. Tamer, R. E. Khalifa, M. Goudaam, M.S. Mohy Eldin., " Removal of Methylene Blue Dye from Synthetic Aqueous Solutions using Dimethylglyoxime Modified Amberlite IRA-420: Kinetic, Equilibrium and Thermodynamic Studies", *Desalination and Water Treatment*, In press, 2020.
 10. G. F. Fawal, R. E. Khalifa, S. A. Elrahman, M.S. Mohy Eldin ., " Poly (Methacrylic Acid) Grafted Regenerated Cellulose Ions Exchangers Films: Kinetics, Isotherms, and Thermodynamics Studies of Cu (II) Ions Separation", *Desalination and Water Treatment*, In press, 2020.
 11. R.E. Khalifa, A.M. Omer, T.M. Tamer, A.A. Ali, Y.A. Ammar, M.S. Mohy Eldin., "Kinetic, equilibrium and thermodynamic studies for the sorptive removal of crude oil spills using a low cost chitosan-poly (butyl acrylate) grafted copolymer", *Desalination and Water Treatment*, In press, 2020.
 12. Ahmed Mohamed Omer, Wagih Abdel-Alim Sadik, Abdel-Ghaffar Maghraby El Demerdash, Tamer Mahmoud Tamer, Randa Eslah Khalifa, Mohamed Samir Mohyeldin, Nada Adel Abdelwahed., " Fabrication of semi-interpenetrated PVA/PAMPS hydrogel as a reusable adsorbent for cationic methylene blue dye: Isotherms, kinetics and thermodynamics studies", *Polymer Bulletin*, Revised, 2020.
 13. Yang, X.K.; Omer, A.M.; Khalifa, R.E.; Zhaohong, H.; and Chao. L., "Fabrication of Tetraethylenepentamine functionalized alginate beads for adsorptive removal of Cr (VI) from aqueous solutions", *International Journal of Biological Macromolecules*, 125 (2019) 1221-1231.

14. **R. E. Khalifa**, A.M. Omer, T. M. Tamer, W. S, M. S. Mohyeldin., " Removal of Methylene BlueDye from Synthetic Aqueous Solutions using Novel Phosphonated Cellulose Acetate Membranes:Adsorption Kinetic, Equilibrium, and Thermodynamic Studies", *Desalination*, 144 (2019) 272–285.
15. **R.E. Khalifa**, A.M. Omer, T.M. Tamer, A.A. Ali, Y.A. Ammar, M.S. Mohy Eldin., "Efficienteco- friendly crude oil adsorptive chitosan derivatives: kinetics, equilibrium and thermodynamicstudies", *Desalination and Water Treatment*, (2019) 1–13.
16. A.M. Omer, **R.E. Khalifa**, T.M. Tamer, M. Elnouby, A.M. Hamed, Y.A. Ammar, A.A. Ali ,M.Gouda, M.S.Mohy Eldin.," Fabrication of a novel low-cost superoleophilicnonanyl chitosan-poly(butyl acrylate) grafted copolymer for the adsorptive removal of crude oil spills", *InternationalJournal of Biological Macromolecules*, 140 (2019) 588–599.
17. T. M. Tamer.; W. M. Abou-Taleb.; G. D. Roston.; M .S. Mohyeldin.; A. M. Omer .;**R. E. Khalifa**.;A. M. Hafez.," Formation of Zinc Oxide Nanoparticles using Alginate as a Template forPurification of Wastewater", *Journal of Environmental Nanotechnology, Monitoring &Management*, 10 (2018) 112-121.
18. Amira M.G. Darwish , **Randa E. Khalifa**, Sobhy A. El Sohaimy.," Functional properties of chia seed mucilage supplemented in low fat yoghurt", *Alexandria science exchange Journal*, 39 (2018) 450-459.
19. Mohy Eldin, M. S.; Abd Elmageed, M. H.; Omer, A. M.; Tamer, T. M.; Yossuf, M. E. and **Khalifa, R. E.**, "Novel Aminated Cellulose Acetate Membranes for Direct Methanol Fuel Cells (DMFCs)", *International Journal of Electrochemical Science*, 12 (2017) 4301-4318.
20. Mohy Eldin, M. S.; Abd Elmageed, M. H.; Omer, A. M.; Tamer, T. M.; Yossuf, M. E. and **Khalifa, R. E.**, "Novel Proton Exchange Membranes based on Sulfonated Cellulose Acetate for Fuel Cell Applications: Preparation and Characterization", *International Journal of Electrochemical Science*, 11 (2016) 10150-10171.
21. Mohy Eldin, M. S.; Abd Elmageed, M. H.; Omer, A. M.; Tamer, T. M.; Yossuf, M. E and **Khalifa, R. E.**, "Development of Novel Phosphorylated Cellulose Acetate Polyelectrolyte Membranes for Direct Methanol Fuel Cell Application", *International Journal of Electrochemical Science*,11 (2016) 3467-3491.

• **Book Chapters**

1. Ahmed M. Omer, Mohamed S. Mohy Eldin, Tamer M. Tamer, **Randa E. Khalifa**, Samar A. Gaber. Smart Biopolymer Hydrogels Developments for Bio-technological Applications. In: Mondal M. (eds) Cellulose-Based Superabsorbent Hydrogels. Polymers and Polymeric Composites: A Reference Series. Springer, Cham) Nature; Springer International Publishing, Switzerland, (2018).
 2. Ahmed M. Omer, Mohamed S. Mohy Eldin, Tamer M. Tamer, **Randa E. Khalifa**, Samar A. Gaber. M. A. Hassan, Development of superabsorbent graft copolymer hydrogel based on carboxymethyl cellulose for water retention in sandy soil carboxymethylcellulose: Properties, Applications and Effectiveness" Nova Science Publishers, New York. Accepted (2018).
- Encyclopedia**
3. Khalifa, R. E.; Mohy Eldin, M. S.; Omer, A. M. Tamer, T. M.,” Cellulose Based Polyelectrolyte Proton Exchange Membranes for Fuel Cell Applications”. Review, Taylor & Francis encyclopedias, May 2019.