



Curriculum Vitae

1: Personal Details

Surname	Shalaby		
Other names	Marwa Saied Mohamed Ibrahim Shalaby		
Title	Associate professor in Chemical Engineering		
Gender	Female		
Home address	Villa 41, South Academy D, Fifth settlement, New Cairo		
Work Address	National Research Centre, Dokki, Cairo, Egypt		
		Post Code	12633
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Mobile	02 01006525752	e- mail	marwshalaby_4@yahoo.com marwshalaby14@gmail.com ms.shalaby@nrc.sci.eg
Date of Birth	Day 01	Month 04	Year 1978
Place of birth	Cairo-Egypt		

2: Education

School/college/University	Degree Obtained	Date (from-to)
Faculty of Engineering Cairo University	Ph. D. of chemical engineering	August – 2010
Faculty of Engineering Cairo University	M. Sc. of chemical engineering	April – 2004
Faculty of Engineering Cairo	B. Sc. of chemical engineering	July – 2000

University		
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3: Training Attended

Training attended/Technical skills Acquired	Place	Dates (from-to)
Training on membrane manufacturing	SUSHOU- Holykem co. –China	From 29/8/2016 to 5/8/2016 & from 14/11/2017 to 29/11/2017
Workshop About Environmental Challenges of Egypt- Assessment of Some Inorganic Pollutants in Cairo's Air Using X- ray Fluorescence Technique	National Research center NRC, Cairo	21-02-2012
Workshop on Application of Nanotechnology in Industry: Opportunity of integration Among IDB Member States	National Research center NRC, Cairo	From :29/1/2012 To: 31/1/ 2012
Implementation of ICDL (7-modules) courses	Systems and information department (NRC)	07 – 18 / 03 / 2010
Paints and Chemical Industries	Swiss Chem. for chemical industries Co.	10-12/05/ 2010
Safety and Occupational health	Training center (NRC)	18 – 22 / 10 / 2009
Civil Defense	Training center (NRC)	08 – 12 / 11/ 2009

Scientific reading& writing	Training center (NRC)	From : 22 / 11 / 2009 To : 03/ 12 / 2009
Production of phosphoric acid and fertilizers	Abu-Zaabal company for chemicals and fertilizers	From: 02/01/2002 To: 28/02/2002
Petroleum Services	Alex. Refining Co.	From: 01/07/1998 To: 31/07/1998

4. Teaching Training courses

Training courses	Place	Dates (from-to)	Students
Introduction to paint and coating technology	Training center (NRC)	From 3/7 to 25/7/ 2011	4 th year faculty of engineering students-Cairo university
Paints industry wastewater treatment through biological aerated filtering technology, case study	Training center (NRC)	From 3/7 to 25/7/ 2011	3 rd year faculty of science students- Cairo university
Paint and coating basics and corrosion in metal	Training center (NRC)	From 19/9 to 3/10/2011	4 th year faculty of science students-Cairo university
Different application of ultrasonic homogenizer	Training center (NRC)	From 1/7 to 15/7/2012	4 th year faculty of science students-Cairo university
Utilization of solid waste comes out of phosphoric acid in fertilizer industry	Training center (NRC)	From 26/8 to 9/9/2012	4 th year and 3 rd year faculty of Engineering students-Cairo university

5 : Employment History

Employer	Position	Dates (from-To)
Associate Professor	National Research Centre (NRC)	December 2015 till now
Researcher	National Research Centre (NRC)	December 2010, To 2015
Associate Researcher	National Research Centre (NRC)	From: June – 2004 To: December – 2010
Researcher Associate	National Research Centre (NRC)	From: November – 2001 To: June – 2004

6. FIELDS OF INTEREST

Teaching chemical engineering courses as:

General & theoretical Engineering Chemistry
Nanotechnology
Unit Operation
Organic and inorganic technology
Petrochemical & Environmental industries
Environmental Engineering for Civil Engineers

Research fields

Water desalination
Process development of membrane manufacture
Nanotechnology & Nanostructure synthesis
Water & Wastewater Treatment.
Large scale brackish water desalination plants.
Disinfection
Process development in chemical & Paint Industries (PHD field) .
Fertilizer Industry.
Polymer Synthesis.

7. PUBLICATIONS

1.S.T.El.Sheltawy, G.El.Diwani, A.F.Shaaban, S.R.Mostafa, **M.S.Mohamed**,
" Utilization of phosphogypsum waste in the production of PK fertilizer.
Study of Kinetic parameters on the process ", *Cairo University Journal for
Environmental Science, Dec.2004, Vol.2, Number1.*

2. A.F.Shaaban, H.Abd El-Aziz, M.A.Khedr, **M.S.Mohamed**, " Process
Development for the production of selected metallic soaps and driers", *The*

Transaction of the Egyptian Society of Chemical Engineers, January 2009, Volume 35, Number 1.

3. A.F. Shaaban, H.A. Mostafa, M.A. Khedr, **M.S. Mohamed**, " Process engineering development for the manufacturing of manganese octoate on a pilot plant scale" , *Chemical Engineering Research and Design* V 90 , pp 643-650, **2012**.

4. H.H. Shaarawy, **M. Saied**, "Production of Sodium Hypochlorite or Mixed Oxidant using Rhodium/Rhodium Oxide Mixed Modified Electrode", *Australian Journal of Basic and Applied Sciences*, V6(6): 204-215, June **2012**.

5. Sh. El Rafie, **M. S. Mohamed**, S. Hawash, "Human Urine As Alternative Natural Slow Release Fertilizer", *Der Chemica Sinica*, **2012**, 3(5):1311-1324

6. Sh. El Rafie, **M. S. Shalaby**, S. Hawash "Evaluation of struvite precipitated from chemical fertilizer industrial effluents" *Advances in Applied Science Research*, **2013**, 4(1):113-123

7. Sh. El Rafie , **M. S. Mohamed** "Precipitation of nano-magnesium hydroxide from bittern using ultrasound irradiation", *Der Chemica Sinica*, **2013**, 4(2):69-81

8. **M.S. Shalaby**, H.A. Abdallah, " Preparation of manganese (III) acetylacetonate nanoparticles via an environmentally benign route", *Frontiers of Chemical Science and Engineering* , **2013**, Vol.7 No. 3.

9. Sh. Elrafie, Eman Tora, **Marwa S. Shalaby**, Hesham El Aell; S. Hawash , "Chemical and Solar Energetic Treatment for Human Urine to Produce Natural Fertilizer", *Asian Academic Research Journal of Social Sciences & Humanities(AARJSH)*, **Nov.2013**, Vol.1, Issue17:120-138.

10. Sh El Rafie , Randa Othman, **Marwa M. Shalaby**, S Hawash , "Nutrient Recovery from Sewage Wastewater and Bittern as Precipitated Struvite Using Zeolite and Activated Carbon as Adsorbent", *Research Journal of Pharmaceutical, Biological and Chemical Sciences (RJPBCS)*, October-December **2013** ,Vol. 4, Issue 4 : 1015-1025.

11. G El Diwani, N Motawie, HH Shaarawy, **MS Shalaby** , "Nitrogen Slow Release Biodegradable Polymer Based on Oxidized Starch Prepared via Electrogenated Mixed Oxidants", *Journal of Applied Sciences Research*, V

9(3): pp 1931-1939, 2013.

12. M.S.Shalaby ,Sh.El rafie*, H.Abd El Bakky, E .Torra , Cultivation of Microalgae Using Struvite and Human Urine for oil Production. *Research Journal of Pharmaceutical, Biological and Chemical Sciences (RJPBCS)*, **July - August 5(4) , pp. 1172-1187, 2014.**

13. M.S.Shalaby, Sh. El Rafie, "Preparation of nano-ammoniated ammonium carnallite from using industrial effluents and saline", *Advances in Applied Science Research*, 5(2):334-346, **2014.**

14. M.S.Shalaby, Sh. El Rafie, "Case Study For Removing Calcium And Precipitating Struvite From Chemical Fertilizer Industrial Effluents " *Asian Academic Research Journal of Multidisciplinary*, 1(22) , JUNE 2014, ISSN : 2319 – 2801.

15. **M. S. Shalaby** ,* Sh. El-Rafie, A. H. Hamzaoui, A. M'nif. " Modeling and Optimization of Phosphate Recovery from Industrial Wastewater and Precipitation of Solid Fertilizer using Experimental Design Methodology", *Chemical and Biochemical Engineering Quarterly.*, 29 (1) 35–46 (2015)

16. **M. S. Shalaby** , Sh. El-Rafie," Struvite Precipitation and Phosphorous Removal from Urine Synthetic Solution: Reaction Kinetic Study", *Bulletin of Chemical Reaction Engineering & Catalysis*, vol 10 (1), 2015, 88-97.

17. E. M. H. Khater, Sh. El Rafie, **M.S.Shalaby**, A. M. El-Rafei, "Preparation and Characterization of Magnesia Precipitated from Waste Liquid Bittern", *International journal of scientific research*, Vol.4 no. 9 Sept 2015, 484-489, ISSN No 2277 - 8179.

18. H. Abdallah, **M. S. Shalaby**, A. M. H. Shaban, " Performance and Characterization for Blend Membrane of PES with Manganese(III) Acetylacetonate as Metalorganic Nanoparticles", *International Journal of Chemical Engineering* , Volume 2015, Article ID 896486, 9 pages, <http://dx.doi.org/10.1155/2015/896486>.

19. Khater EMH, **Shalaby MS**, Sh El Rafie, and Haitham Youssif , " Process Design for Struvite Precipitation from Industrial Wastewater Stream: Special Design", *Research Journal of Pharmaceutical, Biological and Chemical Sciences (RJPBCS)*, Vol. 6 no.4, July 2015, 1586-1599.

20. Nabila H. Hussien, H. H. Shaarawy , **M. S. Shalaby**, " Sewage Water Treatment Via Electrocoagulation Using Iron Anode", *ARPN Journal of*

Engineering and Applied Sciences, VOL. 10, NO. 18, OCTOBER 2015, 8290-8299.

21. Ayman El-Gendi, Sahar Ali, Heba Abdalla , **Marwa Saied,**" Microfiltration/ultrafiltration polyamide-6 membranes for copper removal from aqueous solutions", Membrane Water Treatment, Vol. 7, No. 1 (2016) 55-70 DOI: <http://dx.doi.org/10.12989/mwt.2016.7.1.055>.

22. N. M. Khattab, M. A. Badr, E. T. El Shenawy, H. H. Sharawy, **M. S. Shalaby,** " Feasibility of Hybrid Renewable Energy Water Pumping System for a Small Farm in Egypt ", International Journal of Applied Engineering Research, ISSN 0973-4562 ,Volume 11, Number 11 (2016) pp 7406-7414 © Research India Publications. <http://www.ripublication.com>.

23. Sh El Rafie, Khater EM, M El Bauomy, **Mohamed M.S.,**"Production of High Purity Hydrogen from Magnesium Metal Reaction with Citric Acid in Seawater", Research Journal of Pharmaceutical, Biological and Chemical Sciences (RJPBCS), Vol. 7 no.6, November 2016, 725-735.

24. **M.S. Shalaby,** " Process consideration for by-product recovery in wastewater treatment", Scholar press, ISBN-10: 3659845329, ISBN-13: 978-3-659-84532-1, <https://www.scholars-press.com/catalog/details//store/gb/book/978-3-659-84532-1/process-consideration-for-by-product-recovery-in-wastewater-treatment>.

25. **M. S. Shalaby,** H. H. Shaarawy, A. M. Shaban, H. Abdallah, "Evaluation For RO-Brackish Water Desalination: A Case Study in Tor Sinai - South Sinai Governate", ARPN Journal of Engineering and Applied Sciences, VOL. 11, NO. 23, December 2016, 13650-13658.

26. Sh.El Rafie, **M.S.Shalaby,** "Modeling Optimization and Recovery of High-Purity Magnesium Oxide from Bittern Using Ammonia Precipitation", Research Journal of Pharmaceutical, Biological and Chemical Sciences (RJPBCS), Vol. 8 no.2, April 2017, 2216-2227.

27. H. Abdallah, **M. S. Shalaby,** A.M. Shaban, "Fabrication of reverse osmosis spiral wound Membranes using local materials", Proceedings of the 11th water desalination conference in the Arab countries, 18-19 April 2017.

28. Laura Borea , Vincenzo Naddeo , **Marwa S. Shalaby** , Tiziano Zarr, Vincenzo Belgiorno ,Heba Abdalla , Ahmed M. Shaban (2017).

Wastewater treatment by membrane ultrafiltration enhanced with ultrasound : Effect of membrane flux and ultrasonic frequency. Ultrasonics, Volume 83, February 2018 , Pages 42-47.

29. Gawel Sołowski, **Marwa.S.Shalaby**, Heba Abdallah, Ahmed. M. Shaban , Adam Cenian. Production of hydrogen from biomass and its separation using membrane technology, Renewable and Sustainable Energy Reviews Volume 82, Part 3, February 2018, Pages 3152-3167.

30. Sh. El Rafie, **M. S. Shalaby**, Randa Osman, “Preparation of magnesium gluconate from Citrate solution”, ARPN Journal of Engineering and Applied Sciences, VOL. 13, NO. 2, January 2018 ISSN 1819-6608.

31. Abdallah, H., **Shalaby, M.S.**, Saad, M.A., Shaban, A.M., (2018) Supporting polyvinylchloride polymeric blend membrane with coated woven fabric, Journal of Membrane Science and Research 4, 174-180.

32. Tarek S. Jamil, A. M. Shaban, **M. S. Shalaby**, E. R. Souaya, M. R. Sedra, A.H.Abd El Aziz (2018). Synthesis and Characterization of Polyaniline/Zeolite X Composites as Anticorrosion Coating Materials, ISSN 1560-0904, Polymer Science, Series B, 2018, Vol. 60, No. 3, pp. 387–394. © Pleiades Publishing, Ltd., 2018.
DOI: 10.1134/S1560090418030120

33. H. Abdallah, A. El Gendi, **M. S. Shalaby**, A. Amin, M. El- Bayoumi, A.M. Shaban (2018). Influence of cellulose acetate polymer proportion on the fabrication of polyvinylchloride reverse osmosis blend membrane, experimental design. Desalination & Water Treatment Vol. 116, 29–38.

34. **Marwa S.Shalaby**, Vincenzo Naddeo, Laura Borea, Heba Abdallah, Ahmed M.Shaban, Tiziano Zarra, Vincenzo Belgiorno (2018). Development of highly flux antifouling RO polyethersulfone membrane using compacted woven support. Desalination and Water Treatment, V 127, 83-89.

35. Hanem A. Sibak, Shadia A. El-Rafie, Shakinaz A. El-Sherbini, **M.S.Shalaby**, Rania Ramadan (2018). Production of Magnesium Oxalate From Sea Bittern . ARPN Journal of Engineering and Applied Sciences, VOL. 13, NO. 22, November 2018 ISSN 1819-6608.

36. Hanem A. Sibak, Shadia A. El-Rafie, Shakinaz A. El-Sherbini, Randa M. Osman, **Marwa Said**, Rania Ramadan (2018). Kinetic Study of Nano-

Magnesium Oxalate Precipitated From Bittern. ARPN Journal of Engineering and Applied Sciences, VOL. 13, NO. 24, December 2018 ISSN 1819-6608.

37. H.Abdallah, **M.S.Shalaby**, A.Elgendi, A.M.Shaban, Bao-Ku Zhu (2019).Effectiveness of a coagulation step and polyester support on blend polyvinylchloride membrane formation and performance . Journal of Polymer Engineering 39(4) DOI: 10.1515/polyeng-2018-0387.

38. Ahmed H. Abdel Aziz, Tarek S. Jamil, **Marwa S. Shalaby**, Ahmed M. Shaban, Eglal R. Souaya, Nabil A. Abdel Ghany (2019). Application of (polyaniline/zeolite X) composite as anticorrosion coating for energy recovery devices in RO desalination water plants. International Journal of Industrial Chemistry, Volume 10, Issue 2, pp 175–191.

39. **M.S. Shalaby** , H. Abdallah , R. Chetty , M. Kumar , A.M. Shaban (2019) Silver nano-rods: Simple synthesis and optimization by experimental design methodology, Nano-Structures & Nano-Objects 19 (2019) 100342.

40. **M.S.Shalaby**, H.Abdallah, A.M.Shaban,(2019) Frontiers in Water-Energy-Nexus—Nature-Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability(book title), ISBN: 978-3-030-13067-1, *Chapter 25: Pilot Study for Spiral Wound-PVDF Supported UF Membranes for Brackish Water Desalination System.*

41. Revathy Rajakumaran, Vinisha Boddu, Mathava Kumar, **Marwa S. Shalaby**, Heba Abdallah, Raghuram Chetty(2019). Effect of ZnO morphology on GO-ZnO modified polyamide reverse osmosis membranes for desalination, Desalination 467, 245-256

42. **M. S. Shalaby**, Shakinaz A. El-Sherbini, Rania Ramadan, Shadia A. El-Rafie, Hanem A. Sibak, (2019) Environmental Friendlier Magnesium Fuel From Liquid Waste Bittern, ARPN Journal of Engineering and Applied Sciences, VOL. 14, NO. 22.

43. Sh. El Rafie, Elaila H. I., **M. S. Shalaby** (2019).Irrigation of Spinach Plant With RO Desalinated Sea Water , ARPN Journal of Engineering and Applied Sciences, VOL. 14, NO. 23.

44. Mahmoud M.A. Sayed, **Marwa S.Shalaby**, Wafa Rady, Wessam Hussien, Mohamed Magdy, K. El-Sabagh, A.Mohamed, A. Nour Eldin, F.Maher, M.Osama (2019). Design of HHO cell as energy source for

electric vehicles, 18th International Conference on Aerospace Sciences & Aviation Technology, IOP Conf. Series: Materials Science and Engineering 610 (2019) 012089, IOP Publishing doi:10.1088/1757-899X/610/1/012089

45. Chuang-ChaoSun, Ming-Yong Zhou, Jia-Jia Yuan, Yan Yan, You-Zhi Songa, Li-Feng Fang, Heba AbdAllah, **Marwa S. Shalaby**, Ahmed M. Shaban, Bao-KuZhu (2020) Regulating the aggregation of anionic nanoparticles for size-tunable nanochannels Journal of Membrane Science, Volume 604, 1 June 2020, 118076, <https://doi.org/10.1016/j.memsci.2020.118076>

46. H. Abdallah, R. Tamam, **M.S. Shalaby**, D. Elgayar, M.S. Mansor, accepted in Journal of polymer Engineering (March 2020). Blend Polyethersulfone/Zirconium Oxide Octahydrate Membranes Crosslinked by Polyvinyl Alcohol Layer for High Saline Water Desalination.

8. ADDITIONAL INFORMATION

• Teaching Experience:

1. Assistant with the Faculty of Engineering – **Cairo University**, teaching labs and exercise sessions for Preparatory year students (General Chemistry), and credit hours program from 2009 – 2014.
2. Teaching general chemistry lectures in college of Engineering & Technology in **Arab Academy for Science, Technology & Maritime Transport** till 2014.
3. Teaching general chemistry laboratory in Faculty of Engineering- **Helwan University** (Mataria) from 2011-2012.
4. Teaching labs and exercise sessions in chemistry for preparatory year- 6th October University- **faculty of Engineering and technology** from 2010 till 2012.
5. Teaching general Engineering chemistry lectures & environmental engineering & fluid mechanics courses in **Canadian International**

College (CIC) Elsheik Zayd branch and Tagamo3 el-Khames since Fall 2012 and up till now.

- **Participation in Applied Projects:**

1. Co-PI in a Research project funded from STDF (2019-2021) entitled “Spiral wound RO membranes supported with fabrics for water desalination”.(Young researchers call).
2. **Principle Investigator (PI)** in a project (2013-2016) for South Sinai development programs "The production of high cash flow vegetables from high salinity brackish water using RO–desalination plant.
3. **A team researcher** in an ongoing project for " Development of nano and micro structured solar selective coating for industrial large scale production".
4. **A team researcher** in an ongoing project for " Renewable energy from sea water and sun rays” 2013-2019
5. **A team researcher** in an ongoing project for " industrial wastewater treatment and struvite precipitation " Egyptian- Tunisian project from 2011 till 2014 .
6. **A team member** in a project of "precipitation techniques for struvite formation from wastewater streams" , in –projects in NRC from 2011 to 2013.
7. Process development for the production of selected paint-drier-formulations on a pilot scale from August 2010 till May 2011.
8. Process development for the production of some organic phosphonates on a pilot plant scale from August 2007 till May 2010.
9. Beneficial Usage of Wastes produced from Electric Furnace in Iron and Steel Companies from May 2007 till June 2009.

10. Air pollution management for industrial areas in Eastern Company for cigarets and Tobacco (MuharamBeh – Alexandria) from November 2009 till February 2011.

9. Supervision

1. An ongoing Master thesis under title of "Extraction of potassium and nitrogen fertilizer from rice straw" in Faculty of Engineering, Cairo University.
2. An ongoing Master thesis under the of " Vinsasse purification processes using cationic exchange resin " in Faculty of Engineering – Cairo University.
3. An ongoing Master thesis under the title of "Production of magnesium metal from bittern and chemical bi-products as a fuel source" in Faculty of Engineering – Cairo University.
4. On going PhD thesis in faculty of science – Cairo University under title of “ removal of nitrites, and phosphates from wastewater streams”
5. On going PhD thesis in Institute of fluid flow machinery – Gdansk-Poland under title of “ Production of hydrogen from dark fermentation of textile wastewater”[Mutual international supervision]

10. Attended & organized conferences/ events:

- 17th international conference on petroleum research center (9-11 Feb.2014) with an oral presentation.
- 21st International Congress of Chemical and Process Engineering CHISA 2014 Prague (23-27 August 2014 Prague, Czech Republic) with an oral presentation.
- International conference in Gdansk –Poland , VI Baltic Biogas Forum- September 2018.
- International conference in Salerno (water energy nexus-November 2018), (Invited Speaker, Scientific committee member)

- International Conference in Environmental Science, MACAU- china – July 2019, as invited speaker.
- CEST , Rhodes 4-7th September 2019 as Invited Speaker, and member of scientific committee.
- Conference Co-Chairman & Organizer for MTAIC-2019 (1st international conference of membrane Technology and its applications, 26-27th August 2019, NRC – Egypt 2019.
- Egyptian Coordinator of the Italian- Egyptian Symposium’ UrbanWaterSecurity” held in NRC- 15th December 2019

11. Attended courses for Business development:

- Acceleration boot camp entitled" **Business model canvas and Business model generation workshop" 16-21 August 2014** with GESR program from Misr El Khier and Knowledge.

12. International Research / Mobility Projects:

- An accepted **mobility project** fund from Egyptian Academy of Scientific research & technology and Polish academy of science – November 2015.
- **Signed MOU** between National Research Centre and institute of fluid flow and machinery in Gdansk, Poland (me as coordinator)[2016-2021]
- **Principle investigator** in research and mobility project between Egypt and Italy (university of Salerno) with a project entitled “**Application of Advanced Membrane Desalination for a sustainable development of water resources in Mediterranean Countries” (2016-2019)**
- **Principle investigator** of Egyptian – Indian in the project “ Nanomaterials for RO formulations for seawater desalination”[2016-2018].
- Co-PI of Chinese- Egyptian Project (2019-2021) “ Low cost-Polymeric membranes for water desalination and wastewater treatment”.

- Signed MOU between National Research Centre and University of Salerno, Italy (me as coordinator)[2019-2024]

Short term visits:

-Training on membrane manufacturing on industrial scale for different sizes of membrane modules: SUOZHOU- Holykem co. China for 2 times from 29/8/2016 till 5/8/2016 & the second from 14/11/2017 till 29/11/2017.

-Mobility and experience exchange with the Indian team in IITM- Indian Institute of Technology Madras – in the field of RO-membrane fabrication and applications for 10 days during July 2017, and 10 days in August 2018.

-Training and mobility visits for SEED- Sanitary Civil Engineering department – UNISA- University of Salerno- Italy in the field of eMBR and ultrasonic application for fouling control in membrane wastewater treatment due to a research project (2017-2020) for separate visits each one 10 days in 2017, 2018, and 2019 and a signed MOU between NRC and UNISA from 2018 to 2023.

-Mobility and training visits to IMP-PAN (Institute of fluid flow machinery- Gdansk- Poland) Since 2016 and each visit for about 10 days , and in 2017, and 2018 too for application of polymeric membranes in gas separation from biogas plants.

-Visit to Aegean university, in Athens for collaboration plans between environmental engineering departments and ours in the application of membranes in wastewater treatment in September 2019 for 10 days.

-Research mobility visits for our group to HANGZHOU UNIVERSITY- membrane research group under leadership of Prof ZHU BAUKO in China for membrane application for water and wastewater treatment for 20 days in July 2019.

Merits and awards & Intellectual property rights

- Awards from National Research Centre of scientific excellence in 2013, 2014, 2016, and 2018.

- About 10 submitted patents to Egyptian Patent Office in the field of membrane synthesis, and applications.

PhD students and M.Sc Students:

Ongoing thesis:

1. Gawel Solowski: PhD student- “in Institute of fluid flow machinery – Gdansk- Poland under title of “ Production of hydrogen from dark fermentation of textile wastewater” [Mutual international supervision]
2. Rania Ramadan : PhD student – “Cost effective pretreatment for brackish water desalination”
3. Marwa Hosney : PhD student – “Removal of nitrates, and phosphates from industrial wastewater streams”
4. Mostafa Farok : PhD student – Application of spiral wound modules-UF membranes in oil/water treatment from petroleum refineries.
5. Rasha Saeed: M.Sc student- Optimization of brackish water desalination process.
6. Abdelrahman Yacob: Clay/polymeric UF-membrane for oil removal from petroleum refineries.
7. Eman Gaber: M.Sc Student : Dairy wastewater using membranes: modelling and simulation process design.
8. Yousra Ahmed: PhD student : Application of polymeric membranes in CH₄/CO₂ separation.
9. Ahmed Abdelrahman: M.Sc Student: Application of UF membranes in Dairy wastewater for whey recycling.

Finished Thesis

1. Master thesis for Dina Magdy under title of "Extraction of potassium and nitrogen fertilizer from rice straw" in Faculty of Engineering, Cairo University.
2. Master thesis for Iman Nader under the title of "Vinsasse purification processes using cationic exchange resin " in Faculty of Engineering – Cairo University.
3. Master thesis for Rania Ramadan under the title of "Production of magnesium metal from bittern and chemical bi-products as a fuel source" in Faculty of Engineering – Cairo University.
4. PhD thesis for Ahmed Helmy under the title “Different Corrosion Protection Technologies for Energy Recovery with Mini-Hydro Turbines in Brackish Water Desalination Plants”, in faculty of science- Cairo University.