

CURRICULUM VITAE



Surname: Sahar Saad Ali Ahmed
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Date of birth: 12 December 1966
Place of birth: Cairo
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EDUCATION:

Collage	Degree obtained	Date
INES&R -Ain Shams University Egypt	PhD (Environmental Science)	2008
INES&R- Ain Shams University Egypt	M.Sc (Environmental Science)	2003
Assuit University Egypt	Diploma in applied polymer science	1991-1992
Assuit University Egypt	B.Sc (Chemistry)good - organic chemistry very good	1990

TRAINING:

Training Attended	Place	Dates (fro-to)
Environmental Impact Assessment	Ain shams university	1997 (one month and half)
Water and wastewater management	Ain shams university	1997 (one month)
Principal of Scientific writing	National research centre	2008 two weeks)
Hollow fiber production and module fabrication	National research center	2011 (two weeks)
Permeability test	National research center	2013 (one week)
Spiral wound membrane manufacture	National Research Center	2017 (Two week)

EMPLOYMENT HISTORY:

Employer	Position	Dates (fro-to)
NRC	Professor	2018 till now
NRC	Research Associate	2013- 2018
NRC	Researcher	2008-2013
NRC	Assistant Researcher	2007-2003
NRC	Research Assistant	2002-1997

NRC	Chemist	1997-1993
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FIELD OF INTEREST:

- Environmental and applied chemistry
- Water & Wastewater Treatment technology
- Desalination
- Membrane Polymer Technology
- Polymer Nano-Technology
- *Synthesis of:*

“Reliable and effective *flat* membrane via casting technique for UF, NF, RO FO , and fuel cell membranes preparations & applications, and *Hollow fiber* membrane ”

Supervision :

I have 1 PhDs students and Three MSc Thesis's entitled:

1. Bacterial degradation of Phenolic compounds. Ph.D. (Ended)
2. Development of forward osmosis membrane by casting for sea water desalination. M.Sc.
3. Optimization of integrated membranes system for water treatment (M.Sc)
4. Development of forward osmosis membranes by casting for sea water desalination. M.Sc

PUBLICATIONS AND PATENTS:

I. Publications:

1. *Sahar S. Ali and Heba Abdallah , Treatment of dyed saline water using developed polyethersulfone/ cellulose acetate nanofiltration blend membranes" Desalination and water Treatment 198 (2020)80-89.*
2. Marwa Youssef., Enas El-shatoury, **Sahar S. Ali**, Gamila E. El-Taweel "Enhancement of phenol degradation by *free and immobilized mixed*

culture of providencia stuartii PL4 and pseudomonas aeruginosaPDM isolated from activated sludge". Bioremediation journal vol.23 no.2 (2019)pp 53-71

3. *Shereen Kamel Amin, Heba Abdallah, Sahar S. Ali, Adnan Alhathal Alanezi, Nanofiltration composite polymeric/ceramic membranes prepared from powder waste of ceramic tile kiln remnants Desalination and water Treatment 126 (2018) 67–72.*

4. *Marwa Youssefa*, Einas H. El-Shatouryb, Sahar S. Ali, Gamila E. El-Taweela, Mohamed M. Kamel Isolation, screening and identification of 2, dichlorophenol -degrading bacteria from activated sludge Egyptian Journal of Environmental Research EJER, Vol. 9, October 2017*

5. *Hanaa M. Ali, Azza I. Hafez, Maaly M. A. Khedr, Hanaa Gadallah, RaniaSabry, Sahar S. Ali, A. G. Gadallah. Techno-Economic Evaluation of Forward/Reverse Osmosis Hybrid System for Saline Water Desalination. Desalination and Water Treatment, 98 (66-77)*

6. *Sahar S. Ali, Rania Sabry, Hanaa M. Ali *, Hanaa Gadallah. Enhancement of nonwoven cellulose triacetate forward-osmosis membranes by surface coating modification. International Journal of Engineering & Technology, 6 (4) (2017) 124-130.*

7. *S. R. Tewfik, A. G. M. G. Abulnour, *H. F. Shaalan, M. Elanwar, S. S. Ali, K. Abed, M. A. Badr, M. H. Sorour Analysis of some engineering parameters relevant to the performance and reliability of hollow fiber spinning system. ARPN Journal of Engineering and Applied Sciences VOL. 12, NO. 15, AUGUST . 2017.*

8. *M. AZAB EL-LIETHYI*, BAHAA A. HEMDANI, FARAG A. SAMHANI, SAHAR S. ALI AND GAMILA E. EL-TAWEELI OPTIMIZING CONDITIONS FOR CRUDE OIL DEGRADING BACTERIAL CONSORTIUM ISOLATED FROM AQUATIC ENVIRONMENT. Poll Res. 36 (2) : 197-204 (2017)*

9. *Hanaa M. Ali, Hanaa Gadallah, Sahar S. Ali, Rania Sabry, and A. G. Gadallah Pilot-Scale Investigation of Forward/Reverse Osmosis Hybrid*

System for Seawater Desalination Using Impaired Water from Steel Industry International Journal of Chemical Engineering Article ID 764680 (2016) 01-09 |

10. **Sahar S. Ali**, Rania Sabry, Hanaa Gadallah*, and Hanaa M. Ali Investigation of Ammonium Sulfate/Ammonium Di-Hydrogen Phosphate fertilizers as Draw Solute for Forward Osmosis Desalination. *Research Journal of Pharmaceutical, Biological and Chemical Sciences January–February 2016 RJPBCS 7(1) Page No. 760.*

11. Ayman El-Gendi, **Sahar Ali**, Heba Abdalla and Marwa Saied" Microfiltration/ultrafiltration polyamide-6 membranes for copper removal from aqueous solutions" *Membrane Water Treatment*, Vol. 7, No. 1 (2016) 55-70.

12. Rania Sabry, A. G.Gadallah, **Sahar S. Ali**, Hanaa M. Ali, Hanaa Gadallah, "Application of Forward/Reverse Osmosis Hybrid System for Brackish Water Desalination using El-Salam Canal Water, Sinai, Egypt, Part (2): Pilot Scale Investigation *International Journal of ChemTech Research Vol.8, No.11, pp 102-112, 2015.*

13. Hanaa Gadallah, Hanaa M. Ali, **Sahar S. Ali** , Rania Sabry, Abdelrahman Gadallah, "Application of Forward/Reverse Osmosis Hybrid System for Brackish Water Desalination using El-Salam Canal Water, Sinai, Egypt, Part (1): FO Performance", *International proceeding of Chemical, biological and environmental engineering, (Environment Science and Engineering IV), vol. 68, 2014.*

14. Hanaa M. Ali, Hanaa Gadallah, **Sahar S. Ali**, Rania Sabry and A. G. Gadallah "Application of Forward Reverse Osmosis Membrane Hybrid System for Seawater Desalination Using Impaired Water from Steel Industry Part,(II): FO performance" *EJSR Vol.126, no.2. Nov., 2014pp.162-177*

15. EL-Gendi, A. Deratani, S.A. Ahmed, **S.S. Ali** " Development of polyamide -6/ chitosan membranes for water desalination" *Egyptian Journal of Petroleum (EGYJP) vol. 23 part 2, 2014.*

16. *M. M. H. El-Sayed*^{1,2,3}, H. E. M. El-Sayed^{4,5} and S. S. Ali "Cadmium removal from aqueous solutions via biosorption onto acclimatized activated sludge". IDA Journal of Desalination and Water Reuse Vol 6, No 3. Published online: 27 Nov.(2014).*
17. *.H. Abdallah and S,S. Ali, Thermodynamic Modeling of PES/CA Blend Membrane Preparation, International Review of Chemical Engineering (I.RE.CH.E.), Vol.4 , N.5, ISSN 2035-1755 Sept. 2012.*
18. *.El-Gendi, A Dernati., S.A. Ahmed, S.S Ali, The development of polymeric membrane via casting technology for water desalting, Eru membrane conference 23-27 Sept 2012 procedia Eng.44,2012, 1772.*
19. *A El-Gendi, S.S Ali, S.A. Ahmed, H.A. Talaat, Development of membrane blend using casting technique for water desalination, Membrane Water Treatment, Vol. 3, No. 3. July (2012) 201-209*
20. *Sh. K. Amin. N.M. Maarouf, S. S. Ali, Sustainable Development of Cultural Heritage Via Anti Weathering Nanoparticles Material, Australian Journal of Basic and Applied Sciences, 6(6): PP227-236, 2012 ISSN 1991-8178.*
21. *A.El-Gendi, H. Abdallah and S. Ali, Construction of Ternary Phase Diagram and Membrane Morphology Evaluation for Polyamide/Formic acid/Water System, Australian Journal of Basic and Applied Sciences, 6(5): 62-68, 2012 ISSN 1991-8178.*
22. *S.S. Ali and H. Abdallah, Development of PES/CA Blend RO Membrane for Water Desalination, International Review of Chemical Engineering (I.RE.CH.E.), Vol. 4, N. 3 ISSN 2035-1755 May 2012.*
23. *Nermin M. mohamed and Sahar. S. Ali, Economic Study For Greywater Reuse To Achieve The Sustainability In Egypt, Australian Journal of Basic and Applied Sciences, 6(3): 655-665, 5, 2012 ISSN 1991-8178.*

24. S.A. Ahmed, M.H Sorour , H.A. Talaat **S. S. Ali** , *Functional Analysis of Cellulose Acetate Flat Membranes Prepared Via Casting Technique , Desalination and Water Treatment (DWT) , 1, 7, 2010.*

25. H. F. Shaalan , Taha M. A. Razek , **Sahar S. Ali** ,A.N. Hassan and A.G. Abulnour, "Parametric and Kinetic Study for p-NP Removal in Batch Activated Sludge Process Utilizing Acclimatized Secondary Sludge", *J. Egypt. Soc. Biotech. Environ. Sci. v.11(C) (2008) 1-18.*

26. A.G. Abulnour, H. F. Shaalan ,Taha M. A. Razek, A.N. Hassan and **Sahar S. Ali**, "Treatment of phenolic industrial wastewater using activated sludge process preceded by anoxic selector", *CATRINA 3 (3) (2008)17-23.*

27. S.A. Ahmed, H.A. Talaat , **S. S. Ali** , *Functional Analysis of Cellulose Acetate Flat Membranes Review Article, 3rd International Conference of Engineering Research Division Cairo Egypt , March 2008.*

28. A.G.Abulnour, A. N. Hassan, H.F. Shaalan, T.A. Abdelrazek, and **S.S. Ali**, "Factors affecting the removal of phenol from simulated wastewater by activated sludge", *J Environmental Science (2006) Vol. (11) No. (2).*

29. A.G Abulnour,. A.N. Hassan and **S.S.Ali** , *Study of some factors affecting pharmaceutical industry effluents treatment by activated sludge process, J of Environment al Science Vol 3. No. 2, 2001.*

II. Patentes:

I have **Three** gained patents from Arab Republic of Egypt Ministry of Scientific Research Academy of scientific Research & Technology PATENT OFFICE, Two patents in 2015 & one patent in 2018

1. S.A. Ahmed, **S. S. Ali**, M.H Sorour , H.A. Talaat , A. .G Abulnour, A method for preparation cellulosic flat sheet membrane via casting technique, **patent no. 27626 / 2015**, Egyptian Academy of Science & Technology,

2. Heba M. abdallah and **Sahar S. Ali** "Manufacture of PES/ CA blend RO membrane for water desalination. **Patent No. 27265//2015.**

3. **Sahar Saad Ali**, Rania Sabry, Hanaa Mohamed Ali and Hanaa Gadallah " A draw solute compound used for water desalination via forward osmosis unit and its preparation". **Patent No. 28925 /2018**

And I have Six submitted patents:

1. Surface chemical modification of forward osmosis membrane for water desalination. Patent No. 1849/2015
2. Fabrication of a new forward osmosis cellulosic flat membrane for water desalination 328/2016.
3. Preparation of a highly efficient ionic draw solutes forward osmosis applications. 121/2017
4. Developed Unit for Hollow Fiber Extrusion. 370/2017.
5. Fabrication of highly efficient forward osmosis membrane for water desalination 2044/2020
6. A method to fabricate of an efficient polymer electrolyte fuel cell membranes patent no.

CONFERENCES:

1. A.G Abulnour, H.F. Shaalan, **S. S. Ali**, "Factors affecting the removal of phenol from simulated wastewater by activated sludge", Arabic Organization for Administration Development, Modern "Trends for Treatment of Water and Wastewater" Conference, November 21-25, 2004, Sharm-El-Sheikh, Egypt.
2. S.A. Ahmed, M.H. Sorour, H.A. Talaat , **S. S. Ali** , Functional Analysis of Cellulose Acetate Flat Membranes Review Article, 3rd International Conference of Engineering Research Division Cairo Egypt , March 2008.
3. Oral presentation by **Sahar S. Ali** Title "Treatment of Phenolic Industrial Wastewater Using Activated Sludge Process Preceded by Anoxic Selector PROCEEDINGS OF THE THIRD

INTERNATIONAL CONFERENCE ON FUTURE TRENDS IN
GENETICS AND BIOTECHNOLOGY FOR SAFE
ENVIRONMENT, ISMAILIA, EGYPT, JULY 8-9, 2008

4. A. El-Gendi, A Dernati., S.A. Ahmed, **S.S Ali**, The development of polymeric membrane via casting technology for water desalting, Eru membrane conference 23-27 **Sept** 2012 procedia Eng.44,2012, 1772.
5. Hanaa Gadalla, Hanaa Ali, **Sahar Ali**, Rania Sabry and Abd El-Rahman Gadallah Application of Forward/Reverse Osmosis Hybrid System for Brackish Water Desalination using El-Salam Canal Water, Sinai, Egypt,Part (1): FO Performance" ICESE 2014
6. **B1.5** . R. Tewfik, A. G. M. G. Abulnour, *H. F. Shaalan, M. Elanwar, **S. S. Ali**, K. Abed, M. A. Badr, M. H. Sorour Analysis of some engineering parameters relevant to the performance and reliability of hollow fiber spinning system. S (Nat. Res. Cent., Cairo-Dokki, EG) [962] Chisa Bragure, 27-31Aug. 2016.
7. MTA2019-5142 Hanaa M. Ali, Rania Sabry, **Sahar S. Ali**, Hanaa Gadallah, Ahmed Shaban : Synthesis and performance of cellulosic forward osmosis membrane for water desalination Nat. Res. Cent., Cairo-Dokki, EG), 26-27Aug. 2019.
8. MTAIC 2019-5242: Mai Ali Hassan¹, F.A. Taher, Rania Sabry, G. Hamdy, **Sahar Ali** Synthesis and characterization of a novel highly hydrophilic FO membrane and its application for sea water desalination. Nat. Res. Cent., Cairo-Dokki, EG), 26-27Aug. 2019.

APPLIED RESEARCH PROJECTS (1993 -2019)

- 1- Production of fertilizer hydrogel
- 2- Treatment of Polluted Ballast Water and Environmental Impact Assessment of Marin Pollution in Egyptian Boards Including Petroleum Boards.

- 3- Recovery of Urea and its Derivatives from Industrial Wastewater of Abukir Company for Fertilizers and Chemical Industries.
- 4- Extraction of Oil from Industrial Wastewater and Bleaching Powder in Oil and Soap Companies.
- 5- Design of Alternative Systems for Treatment of Industrial Wastewater of Esteelco and El Nasr for Pipes Factories.
- 6- Design of Brackish Water Desalination Plant.
- 7- Treatment of Hazards Organic Materials by Fenton's Oxidation Method.
- 8- Modern Techniques used for Treatment of Drainage Effluents.
9. Instruction of two municipal wastewater treatment plants for El-Naser of specialized chemical at Abo-zabal

- 10- Development of fertilizer hydrogel from compounds in some food industrial waste Hydrogel
- 11- Development of membrane technology for water desalination 2008 - 2010.
- 12- Development and optimization of pesticide industry effluent treatment system using NF and oxidation technique. (2007-2012).
- 13- Technological and Engineering Development for Production of Desalination Hollow Fiber, Ministry of International Cooperation, National Research Center (2008-2017).
- 14- Formulation and Experimental Evaluation of polymeric concrete Admixtures. concrete. (2010-2013) **ended**.
- 15- Process design and optimization of hybrid forward and reverse osmosis process for water desalination (**ended Feb. 2016**).
- 16- Investigation and Optimization of Recent Types of Draw Solute for Different Forward Osmosis Membrane Process Applications.(ended 2016)
- 17- Bacterial degradation of oil spill in Nile river.(**ended 2016**).

- 18- Development of integrated membranes systems for improving water quality to reach standards of cell and molecular biology applications **ended 2019.**
- 19- Utilization of waste marble dust in nano and micron size for different applications. **Current .**
20. Development and technical evaluation of conducting polymer/ inorganic nano-composite membrane for fuel cells applications. **Current.**
- 21 . Low cost polymeric membrane for wastewater treatment. Egypt-China Cooperation project Project ID:30431 **Current**
22. Production of Reverse Osmosis Spiral Wound Membranes enhanced by fabric support Project Type: Young Researcher Grant with Project ID: 30014(9/2018 to 3 /2020) **Current.**
23. Economic integrated membranes system for pharmaceutical industrial waste water treatment. (2019-2021) .**Current**

Referee:

I participate as a reviewer in

- *Different Elsevier Journals such as (Carbohydrate polymer Desalination and sustainable ground water treatment).*
- *World Applied Science journal*
- *Chinese journal of chemical Engineering.*
- *Ceramics International*
- *European Polymer Journal*
- *Journal of the Chemical Society of Pakistan*
- *Water and Environment Journal.*
- *Applied polymer Science*
- *Desalination and water treatment*

- *Judging 2nd blastoff finals of National Science and engineering fair at Nile university. (25/4/2015)*

Teaching and Training:

I am participating in preparing and teaching water & wastewater treatment and Environmental chemistry Courses for five years for M.Sc students of environmental engineering department at institute of El-Tibeen for Metallogy studies Cairo Egypt. Since (2008 -2013).

- Also, I participate in training courses for Both faculties of Engineering and Science Students at NRC (training centre of NRC) Since 2008 till now.
- Besides that I am consider as co-coordinator and teacher in the many training courses for engineering and chemists for many industrial sector from 2014 till now.