BIOGRAPHY OF PROF. MANAR EL-SAYED ABDEL-RAOUF

Email: drmanar770@epri.sci.eg
EGYPTIAN PETROLEUM RESEARCH INSTITUTE
Mob. 01000700960, WhatsApp. 01156689977

Biodata

Prof. Manar El-Sayed Abdel-Raouf
Professor of polymer chemistry at Petroleum Application Department,
Egyptian Petroleum Research Institute,
Nasr city, Cairo.
Birth date: 07/07/1970
Nationality: Egyptian
Marital status: Married
M. 01000700960**,** 01156689977

W. 202-22745902, 202-22742917

Fax. 202-22474733

Email: drmanar770@epri.sci.eg

drmanar770@yahoo.com

drmanar770@gmail.com

Area of interests:

My main interests focus on different topics:

1- **Surfactants: preparation, charcterization and applications**
2- **Polymer recycling: PET, PS, scrap tyres**
3- **Environmental issues: Wastewater treatment, utilization of natural polymers, climate changes.**
4- **Employment of the AFM in material science.**

Identification:

- **Scopus ID:** 7003968106
- **Orcid ID**: http://orcid.org/0000-0003-0718-2671
- **Researchgate**: https://www.researchgate.net/profile/Manar_El-Sayed_Abdel-Raouf.
- **Web of Science Researcher ID**: M-4803-2013
- **Website:** http://innovationinfo.org/index.php/journal/editorial_board_member/dr-manar-ea-raouf

Current position:

Professor of polymer science at the Egyptian Petroleum research institute.

Carrier Development:

- ✓ Researcher assistance from Jan.1992-16/11/1995
- ✓ Assistant researcher from 17/11/1995-29/10/2000
- ✓ Researcher from 30/10/2000-26/12/2006.
- ✓ Associate Professor from 27/12/2006 -19/02/2012.
- ✓ Professor of polymer chemistry, petroleum application department, EPRI from 19/02/2012.

Academic degrees:

- PH.D. in chemistry, Faculty of Science, Ain Shams University, 2000.

(***Alleviation of the environmental pollution by recycling of Poly (Ethylene terephthalate) into useful products)***

- M.Sc. in chemistry, Faculty of Science, Ain Shams University, 1995.

(*Ethylene Oxide-Propylene Oxide Block copolymers as Demulsifiers for Water-in-oil emulsions)*

- B.Sc. in Science, biochemistry/chemistry branch, Faculty of Science, Ain Shams university, 1991, ***(very good)***.

Scientific Experience:

Theses Supervision:

- M.Sc. thesis entitled **"Synthesis and Characterization of some vinyl ester resins"**
- M.Sc. thesis entitled **"Physico-chemical Studies on some synthesized degradable polyesters"**
- Ph. D. thesis entitled **"Recycling of Poly (ethylene terephthalate) Waste into Curable Resins"**
- M.Sc. thesis entitled **"Recycling of Scrap Tyres and Used Lubricating Oils into Useful Products"**
- M.Sc. Thesis entitled **"Synthesis of Oil Spill Dispersants from Rosin Acid Derivatives"**
- Ph.D. thesis entitled **"The behavior of some acrylate copolymers as lubricating oil additives"**
- Ph.D. thesis of entitled **"Polymeric sugar-based surfactants for different petroleum applications"**
- Ph.D. thesis entitled "**Magnetic nano and microcomposites for industrial waste water treatment"**
- Ph.D thesis entitled "**Comparative study between magnetic microcomposites and cyclodextrin magnetic nanocomposites in removal of some heavy metals from aqueous solutions"**
- Ph.D thesis entitled **"Preparation and characterization of cellulose based smart interpenetrating polymer networks and their application as superabsorbent hydrogels", Ain Shams university, completed**
- M.Sc thesis entitled **"Solvation properties of some surfactants and their inhibition efficiency for carbon steel corrosion", Port Said university, completed.**
- M.Sc thesis entitled **"Electrochemical applications and Solvation thermodynamic properties of some green surfactants", Port Said university, completed**
- M.Sc. thesis etitled: **Design of Bio-based composite hydrogels under green chemistry methodology for possible applications, Benha university, under research**
- M.Sc. thesis etitled**: Antimicrobial bionanocomposite containers for preservation of biological samples, Benha university, under research**
- M.Sc. thesis etitled**: Green synthesis of chitosan- based hydrogel composites for wastewater treatment applications, Benha university, under research.**

Thesis Arbitration:

- M.Sc. Thesis: Synthesis of some Nitrogen Heterocyclic compounds, Benha University, Faculty of science.
- M.Sc. Thesis: Synthesis, Characterization and Applications of some Aromatic and Hetero-aromatic polymers Nanocomposites, Port Said University, Faculty of science.

- M.Sc. Thesis: Synthesis and characterization of some novel core-shell nanoparticles Port Said University, Faculty of science.
- Synthesis of Heterocycles Compounds Using Isothiocyanates under Green Chemistry methodology, Faculty of science, Benha university, 2022.

Scientific Collaboration

Scientific Projects:

- Board Member in the research team working in the project of (**Recycling of Plastic Waste**), sponsored by Prof. Dr. El-Sayed Mohamed Abdel-Bary, El-Mansoura university.
- As senior researcher in the project **"Reduction of Friction in Petroleum Crude Oil Pipelines by Using Local Prepared Polymeric Compounds"** by SAR and EGPC during the period (2004-2006).
- Senior researcher in the project of (**Synthesis of Some Recycled Dendritic Curable Resins Based on PET for Coating Applications**), Joint project between University of North Texas (UNT) and EPRI.
- ***Principle investigator for a project*** entitled (**Green Chemistry Approach for Developing Hydrogels for Agriculture in Egyptian Deserts), Jessor 1031-2016** funded by academy of scientific research and technology (ASRT), Egypt.
- ***Principle investigator for a project*** entitled (**Chitosan-based porous materials for wastewater treatment applications), Barg 37056** funded by STDF, Egypt.

International Conferences attendance and participation:

1- 9th Arab International Conference on Polymer Science and Technology, Held at 10th of Ramadan City-Hurghada, Egypt on 18-22 November, 2007.
Oral presentation: (**Synthesis and Characterization of Novel Crude oil dispersants based on Ethoxylated Schiff base).**

2- 1st Conference on Future of Arabic Energy and Environment, Held at Shepherd Hotel, Cairo, Egypt on 13-14 December, 2008.
Oral presentation: (**Pyrolysis of Mixture of Scrap tyres and used lube oil at different Tyre: oil ratios in presence of Al_2O_3 as a catalyst**)

3- The 12th International Conference on Petroleum, Mineral Wealth, and Development, 7-9 February, 2009, EPRI, Cairo, Egypt.
Oral presentation: (**Thermo-chemical recycling of mixture of scrap tyres and waste lubricating oil into high caloric value products**).

4- The 13th International Conference on Petroleum, Mineral Wealth, and Development, 7-9 February, 2010, EPRI, Cairo, Egypt.
Oral presentation: (**Surface Properties and Thermodynamic Parameters of Some Sugar- Based Ethoxylated Amine Surfactants: 1-Synthesis, Characterization, and Demulsification Efficiency).**

5- The 14th International Conference on Petroleum, Mineral Wealth, and Development, 27-29 March, 2011, EPRI, Cairo, Egypt.
Oral presentation: (**Demulsifier Systems Applied to Breakdown Petroleum Sludge).**

6- The 15th International Conference on Petroleum, Mineral Wealth, and Development, 8-10 April, 2012, EPRI, Cairo, Egypt.
Poster presentation: (**Biodegradable polyoxyethylenated pentaerythritol quadric esters as oil spill Dispersants**)

7- The 17th International Conference on Petroleum, Mineral Wealth, and Development, 8-10 February, 2014, EPRI, Cairo, Egypt.

Poster presentation: **(Low-cost adsorbents for removal of heavy metals from waste water)**

8- The 18th International Conference on Petroleum, Mineral Wealth, and Development, 8-10 February, 2015, EPRI, Cairo, Egypt.

Poster presentation: **(Applications of rosin modified products: Review article)**

9- The 19th International Conference on Petroleum, Mineral Wealth, and Development, 22-24 February, 2016, EPRI, Cairo, Egypt.

Poster presentation: (**Synthesis and Application of Nonionic Surfactants Based on Rosin as Petroleum Sludge Demulsifiers)**

10- The 20th International Conference on Petroleum, Mineral Wealth, and Development, 20-22 February, 2017, EPRI, Cairo, Egypt.

- **Poster presentation: Synthesis and Characterization of Poly (AMPS) and M Poly (AMPS) Hydrogel Composites and Their Application in Removal of Toxic Metal Ions from Contaminated Water**.
- **Oral presentation: Green chemistry approach for developing hydrogels for agriculture in Egyptian deserts.**

11- International Conference on Advanced Technologies and their applications in agriculture, National Research center, Agriculture and Biological Research Division, 27-29 March 2017.

Oral Presentation: (Guar Gum based nanocomposites for agriculture application)

١٢- الملتقي العربي الأول المنظومة التكاملية لإدارة الإبتكار والإبداع وأثرها علي التنمية الإقتصادية (القطاع الزراعي والصناعات الغذائية) ٣-٥ أبريل ٢٠١٧. الجامعة البريطانية بالقاهرة.

Oral presentation: (**Green chemistry modification of natural products to prepare hydrogels for agriculture applications and investigating their swelling properties)**

13- International Egyptian Czech Conference on Nanotechnology Applications IECCNA2017, Cairo University conference Hall,10-11 October 2017.

Oral presentation: (Guar Gum based nanocomposites for agriculture application

14- 13th Arab International Conference on Polymer Science, and Technology [ESPST- 2017], 22-26 October 2017, Sharm El-Sheikh, Egypt.

Oral presentation: (**Application of Guar Gum based Hydrogels in Agriculture: A Review)**

15- The 21st International Conference on Petroleum, Mineral Wealth, and Development, 20-22 February, 2018, EPRI, Cairo, Egypt.

- Poster presentation: (**Some applications of cellulose based hydrogels)**
- **Oral presentation: (Guar Gum Based Hydrogels for Sustained Water Release Applications)**

16- The 22nd International Conference on Petroleum, Mineral Wealth, and Development, 20-22 February, 2019, EPRI- Air defense house, Cairo, Egypt.

- **Poster presentation: Wastewater treatment methodologies**
- **Poster presentation: Swelling properties of green Superabsorbent hydrogels based on castor oil and cellulose derivatives.**

17- The 2nd international conference of Egyptian committee for Pure and Applied chemistry " Chemistry for sustainable future", 20-22 October 2019, Hurghada, Egypt.

- **Oral presentation: Guar gum derivatives for wastewater treatment applications.**
- **Oral presentation: Polystyrene- based hydrogel magnetic nanocomposites for abstraction of some metal cations from aqueous solutions**

18- The Egyptian society of electron microscope, Electron microscopy and the pandemic Covid-19, held on 11-12 October 2020, visual conference.

19- The 5th conference of WISWB, Duhok university, Iraq, 8-10 March 2021.

- **Oral presentation: Application of AFM in material science**.

20- A poster presentation entitled: Green polymers for energy applications in a collaborative workshop between EPRI and SRTA-City which was held at EPRI on 6/3/2022.

21- A workshop entitled: AFM vs SM and TEM in material science which was introduced in the second international conference for the Egyptian Society of Electron Microscopy, ESEM which was virtually organized on 11, 12 October 2022.

Publications:

Published papers:

- ***Surfactants and their applications:***

1- Propylene oxide - Ethylene oxide block copolymers as demulsifiers for water-in-oil emulsions. I- Effect of molecular weight and Hydrophilic-lipophilic balance (HLB) on the demulsification efficiency, N. N. Zaki, **Manar El-Sayed Abdel-Raouf** and A. A. Abdel azim. *Monatshefte Fur Chemie (Chemical Monthly) of Austria, 127, 621(1996).*

2- Propylene oxide - Ethylene oxide block copolymers as demulsifiers for water-in-oil emulsions. II- Effect of temperature, Salinity and pH- value on the demulsification efficiency. N. N. Zaki, **Manar El-Sayed Abdel-Raouf** and A. A. Abdel azim. *Monatshefte Fur Chemie (Chemical Monthly) of Austria, 127,1239(1996).*

3- PolyOxyEthylenated Bisphenol –A for Breaking Water-in-Oil Emulsions, N. N. Zaki, **Manar El-Sayed Abdel-Raouf** and A. A. Abdel azim. *Polymer Advanced Technology, 7,805(1996).*

4- Modified Unsaturated Polyester Resins Synthesized from Polyethylene Terephthalate Waste I: Synthesis and Curing Characteristics. M. Sh. Farahat, A. A. Abdel-azim and **Manar El-sayed Abdel-raouf,** *Macromol. Material Eng., 283, 1-6, 2000.*

5- Surface Activity and Light Scattering Investigation for Some Novel Aromatic Amine Surfactants", A. Al-sabagh, **Manar El-sayed Abdel-raouf,** *Colloid and Surface A. Physico Chem. Eng. Aspects, 251 (2004) 167-174.*

6- Water Based Surfactants from Recycled Poly (ethylene terephthalate) Waste: their use as beach cleaners and in Petroleum Sludge Recovery", A. M. Atta, **Manar El-Sayed Abdel-Raouf,** A. M. Abdel-Raheim, A. A. Abdel-azim. *Progress in Rubber, Plastics and Recycling Technology, Vol.20, No.4, 2004.*

7- Compressive Properties and Curing Behavior of Unsaturated Polyester Resins In The Presence Of Vinyl Ester Resins Derived From Recycled Poly(Ethylene Terephthalate)", A. M. Atta, S. I. Elnagdy, **Manar E. Abdel-Raouf**, S. Elsaeed and A. A. Abdel-Azim *Journal Of Polymer Research, 12,373-383, 2005.*

8- Surfactants from Recycled Poly (ethylene terephthalate) Waste as Water Based on Oil Spill Dispersants", A. M. Atta, **Manar E. Abdel-Raouf,** N. E. Maysour, A. M. Abdul-Rahiem and A. A. Abdel-Azim *Journal of Polymer Research, Vol.13:39-52, 2006.*

9- Curable Resins Based From Recycled Poly (Ethylene Terephthalate) For Coating Applications, A. **Manar El-Sayed Abdel-Raouf** & Elsaeed, S. & A., Abdel-Azim. *Progress in organic coatings,55:50-59,2006.*

10- Synthesis of some diol esters and their investigation as hydraulic brake fluid bases, H. Mohamed and **Manar El-sayed Abdel-raouf,** *Al-Azhar Bull. Sci., vol 15, No.1, June, 2004.*

11- Synthesis and Characterization of Novel Crude oil dispersants based on Ethoxylated Schiff base", S. El-Saeed, R. K. Farag, **Manar E. Abdul-Raouf,** A. A. Abdel-Azim. *International J. of Polymeric Materials, 57:860-877, 2008.*

12- Surface and thermodynamic properties of nonionic surfactants based on rosin maleic anhydride and acrylic acid adduct, A. M. Atta; A. F. El-Kafrawy; **Manar E. Abdel-Raouf;** N. Maysour; A. Gafer *Journal of Dispersion Science and Technology, 31:567–576(2010).*

13- Water-based oil spill dispersants based on rosin formaldehyde resins, A. Atta; **Manar El-Sayed Abdel-Raouf**; N. Maysour; A. Gafer. *Journal of Dispersion Science and Technology, 31:583–595(2010).*

14- Surface Properties and Thermodynamic Parameters of Some Sugar- Based Ethoxylated Amine Surfactants: 1-Synthesis, Characterization, and Demulsification Efficiency", **Manar El-Sayed Abdel-Raouf**, A. Abdul-Raheim, A. Abdel-Azim *Journal of surfactants and detergents (2011) 14:113–121.*

15- Synthesis, Surface-Active Properties, and Emulsification Efficiency of Trimeric-Type Nonionic Surfactants Derived from Tris (2-aminoethyl) amine", **Manar El-Sayed Abdul-Raouf,** A. Abdul-Raheim, N. Maysour and H. Mohamed *J Surfact Deterg (2011) 14:185-193.*

16- Synthesis and Study of the Surface Properties of Alkylnaphthalene and Alkylphenanthrene Sulfonates, **Manar El-Sayed Abdul-Raouf,** N. E. Maysour, A. M. Abdul-Raheim, S. El-Saeed and R. K. Farag *Journal of surfactants and detergents* (*2011) 14:23–30.*

17- Sugar-Based Ethoxylated Amine Surfactants as Demulsifiers for Crude Oil Emulsions: 2-Demulsification of Different Types of Crudes, A. Abdel-Azim, **Manar El-Sayed Abdul-Raouf**, A. Abdel-Raheim and N. Maysour *Brazilian Journal of Petroleum and Gas | v. 4 n. 4 | p. 155-165 | 2010*

18- Demulsifier Systems Applied to Breakdown Petroleum Sludge, A. A. Abdel Azim, A. Abdul-Raheim, R. K. Kamel, **Manar E. Abdel-Raouf,** *Journal of Petroleum Science and Engineering 78 (2011) 364–370*

19- Biodegradable polyoxyethylenated pentaerythritol quadric esters as oil spill dispersants, **Manar El-Sayed Abdel-Raouf** *Tenside Surf. Det.* 49 (2012) 2, 114-123.

20- Some Sugar Fatty Ester Ethoxylates as Demulsifiers for Petroleum Sludge. A. Abdul-Raheim, **Manar El-Sayed Abdel-Raouf**, N. Maysour, A.El-Kafrawy, A. Mehany, A. Abdel-Azim. *J Surfact Deterg (2013) 16:377–387.*

21- Micellization Properties, Molal Volume and Polarizability of Newly Synthesized Gemini-Cationic Surfactants, Farid El-Dossoki, Samir abedelhady, Mona Abedalhmeed, **Manar Abdel-Raouf**, Ahmed Ali, Egypt. J. Chem. Vol. 65, No. 6 pp. 585 - 599 (2022)

Polymer recycling:

22- Synthesis and Characterization of Some Degradable Polyesters". **Manar El-Sayed Abdel-Raouf** *Material Research Innovation,10-2:1433-075, 2006.*

23- Mechanical characterization and chemical resistances of cured unsaturated polyester resins modified with vinyl ester resins based on recycled poly (ethylene terephthalate), Atta, A., **Manar El-Sayed Abdel-Raouf** & Elsaeed, S. & Abdel-Azim, A. *J. Applied Polymer Sci.,103(5), pp.3175-3182, (2007).*

24- Thermochemical Recycling of Mixture of Scrap Tyres and Waste Lubricating Oil", **Manar E. Abdul-Raouf,** N. E. Maysour, A. Abdul-Azim, M. S. Amin. *Energy Conversion and Management 51:1304–1310(2010).*

25- Thermo-Catalytic Versus Thermo-Chemical Recycling of Polystyrene Waste, **Manar El-Sayed Abdel-Raouf,** A. Abdel-Raheim, S. El-Saeed. *Waste Biomass Valor (2013) 4:37–46.*

Environmental issues:

26- PHEMA magnetic nanogels for removal of Cu (II) ions from aqueous solution, **Manar El-Sayed Abdel-Raouf**, A. Abdul-Raheim, A. El-Kafrawy, N. Maysour, A. Ibraheim and A. Abdel-Azim, *International Journal of Chemistry and Material Science Vol. 1(2), pp. 036-044, February 2013.*

27- Synthesis and investigation of hydrogel nanoparticles based on natural polymer for removal of lead and copper (II) ions, R. Farag, S. EL-Saeed, **Manar E. Abdel-Raouf**, *Desalination and Water treatment, 57 (2016) 16150–16160, July.*

28- Low cost biosorbents based on Modified Starch Iron Oxide Nanocomposites for Selective Removal of Some Heavy Metals from Aqueous Solutions, R. Farag, S. EL-Saeed, **Manar E. Abdel-Raouf,** *Adv. Mater. Lett. 2016, 7(5), 402-409.*

29- Adsorbents based on natural polymers for removal of some heavy metals from aqueous solution, A. El-Kafrawy, S. El-Saeed, R. Farag H. El-Saied, **Manar El-Sayed Abdel-Raouf,** *Egyptian Journal of Petroleum (2017) 26, 23–32.*

30- Polystyrene-based magnetic hydrogels for elimination of some toxic metal cations from aqueous solutions, M. Keshawy & A. Abdul-Raheim & **Manar El-Sayed Abdel-Raouf.** Environmental Science and Pollution Research (2020) 27:26982–26997, https://doi.org/10.1007/s11356-020-08340-z.

Green chemistry:

31- Synthesis and characterization of some organic esters for the production of hydraulic brake fluids, H. Mohamed and **Manar El-Sayed Abdul-Raouf** *Egyptian Journal of Petroleum, 18,2: 103-116(2009).*

32- New Model to Eliminate Salts from Sarir Crude Oil: A Case Study, Elnori Elhaddad and **Manar El-Sayed Abdel-Raouf,** *Int. J. Eng. Res. & Sci. & Tech. 2013, Vol. 2, No. 4, November 2013.*

33- A new experimental method to prevent paraffin - wax formation on the crude oil wells: A field case study in Libya. Elnori E. Elhaddad, Alireza Bahadori, **Manar El-Sayed Abdel-Raouf,** and Salaheldin Elkatatny. *Hemijska industrija· Jan. 2014 DOI: 10.2298/HEMIND130717040E*

34- The Rheological Properties of Lube Oil with Terpolymeric Additives, N. S. Ahmed, A. M. Nassar, R. M. Nasser, **Manar El-Sayed Abdel-Raouf** & A. F. El-Kafrawy, *Petroleum Science and Technology 32 (17), 2115-2122(2014)*

35- Novel Terpolymers as Pour Point Depressants and Viscosity Modifiers for Lube Oil, N. S. Ahmed, A. M. Nassar, R. M. Nasser, **Manar El-Sayed Abdel-Raouf** & A. F. El-Kafrawy, *Petroleum Science and Technology 32 (6), 680-687(2014)*

36- Green chemistry approach for preparation of hydrogels for agriculture applications through modification of natural polymers and investigating their swelling properties. **Manar Elsayed Abdel-Raouf**, S. El-Saeed, E. Zaki, A. Al-Sabagh. *Egyptian Journal of Petroleum 27 (2018) 1345–1355.*

37- Preparation and characterization of a new family of bio-interpenetrating network hydrogel based on a green method, Alaa Abdelaziz, Shimaa El-Saeed, Elsayed Zaki, Mohamed abo aly, **Manar Abdel-Raouf**, Ahmed Al-Sabagh, Egyptian journal of chemistry, Article 70, Volume 64, Issue 12, December 2021, Page 7451-7464

38- Synthesis and investigation of green hydrogels for simultaneous removal of mercuric cations and methylene blue from aqueous solutions. Mohamed keshawy, Rasha Sameer and **Manar El-Sayed Abdel-Raouf.** *Egypt. J. Chem.* **Vol. 65**, No. 5 pp. 325 -335 (2022)

39- Atomic Force Microscopy Investigation of Smart Superabsorbent Hydrogels Based on Carboxymethyl Guar Gum: Surface Topography and Swelling Properties, **Manar El-Sayed Abdel-Raouf,** Abdel-raheim Mahmoud and Mohamed Keshawy, Material chemistry and physics, Volume 278, 15 February 2022, 125521.

40- Green starch/graphene oxide hydrogel nanocomposites for sustained release applications, Asmaa Sayed, Mai Yasser, **Manar El-sayed Abdel-raouf,** Reham Mohsen, Chemical Papers, https://doi.org/10.1007/s11696-022-02236-7.

41- Gamma irradiation synthesis of pectin- based biohydrogels for removal of lead cations from simulated solutions, Asmaa Sayed, Fatma Hani, **Manar El-sayed Abdel-raouf** and Ghada Adel Mahmoud, Journal of Polymer Research (2022) 29:372. https://doi.org/10.1007/s10965-022-03219-8.

42- Radiation Synthesis of Green Nanoarchitectonics of Guar Gum-Pectin/Polyacrylamide/Zinc Oxide Superabsorbent Hydrogel for Sustainable Agriculture, Asmaa Sayed, Mai M. Mohamed Manar El-Sayed Abdel-raouf, Ghada A. Mahmoud, Journal of Inorganic and Organometallic Polymers and Materials https://doi.org/10.1007/s10904-022-02465-z. (2022) 32:4589–4600

43- Green synthesis of chitosan/erythritol/graphene oxide composites for simultaneous removal of some toxic species from simulated solution, Asmaa Sayed, Azza M. Mazrouaa, Manal G. Mohamed, Manar El-Sayed Abdel-Raouf, Environmental Science and Pollution Research. https://doi.org/10.1007/s11356-022-23951-4.

44- Alkali-cellulose/ Polyvinyl alcohol biofilms fabricated with essential clove oil as a novel scented antimicrobial packaging material, Asmaa Sayed, Gehan Safwat, Manar Abdel-raouf, Ghada A. Mahmoud, Carbohydrate Polymer Technologies and, Applications (2022), doi: https://doi.org/10.1016/j.carpta.2022.100273

Published review articles:

45- Removal of Heavy Metals from Industrial Waste Water by Biomass-Based Materials: A Review, **Manar El-Sayed Abdel-Raouf** and A. Abdul-Raheim. J Pollut Eff. Cont 2017, 5.

46- Applications of Guar Gum and its Derivatives in Petroleum Industry: A review. **Manar El-Sayed Abdel-Raouf** and A. Abdul-Raheim. Egyptian Journal of Petroleum 27 (2018) 1043–1050https://doi.org/10.1016/j.ejpe.2018.03.005.

47- Rosin: Chemistry, Derivatives, and Applications: a review, **Manar El-Sayed Abdel-Raouf** and A. Abdul-Raheim, BAOJ Chem 2018, 4: 1, 4: 039.

48- Wastewater Treatment Methodologies, Review Article, **Manar El-Sayed Abdel-Raouf**, N.E Maysour, R. K.Farag and A. Abdul- Raheim, Int J Environ & Agri Sci 2019, 3:1, 3: 018.

49- Guar Gum Based Hydrogels for Sustained Water Release Applications in Agriculture, a Review, **Manar El-Sayed Abdel-Raouf**, Curr Res Biopolymers, 2019 2: 111. DOI: 10.29011/CRBP-111.000011.

50- Ionic liquids as demulsifiers for petroleum emulsions: review, Abdulraheim M.A. Hasan, Mohamed Elkeshawy, Alaa Abdel-Aziz and **Manar El-Sayed Abdel-Raouf.** Trends in chemical Engineering journal, vol 19, 2021, p1-17.

Published chapters

51- Drug Delivery: pH-Sensitive Biopolymers, Encyclopedia of Biomedical Polymers, and Polymeric Biomaterials, **Manar El-Sayed Abdel-Raouf**. 2812-2822, (2016).

52- Cellulose-Based Superabsorbent Hydrogels, Springer International Publishing AG, part of Springer Nature 2018, Md. I. H. Mondal (ed.), Cellulose-Based Superabsorbent Hydrogels, Polymers and Polymeric Composites: A Reference Series, https://doi.org/10.1007/978-3-319-76573-0_11-1.

53- Applications of carboxymethyl cellulose in agriculture, Carboxymethyl cellulose, vol. 2, p.289-311.

54- Factors affecting the stability of crude oil emulsions" in Crude Oil Emulsions, Composition and Stability by Intech, 2012, Chapter 10, p. 183. Edited by Prof. Manar Abdel-raouf, ISBN 978-953-51-0220-5

55- Organogels as oil sorbers for oil spill treatment. In: Sorbents Materials for Controlling Environmental Pollution, Current State and Trends, edited by: Avelino Nunez-Delgado, Elsevier, 2021, pages: 387-410.

56- Green polymers and their uses in petroleum industry: current state and future perspectives in: Crude Oil - New Technologies and Recent Approaches" by InTech, edited by Prof. Manar Abdel-raouf. DOI: 10.5772/intechopen.99409

57- Application of guar gum and its derivatives in agriculture, in: Gums, Resins and Latexes of Plant Origin, Reference Series in Phytochemistry, DOI https://doi.org/10.1007/978-3-030-76523-1, *Springer, 2022*.

58- Fruit peels as effective materials for heavy metal remediation from the aqueous environment, Emerging Techniques for Treatment of Toxic Metals from Wastewater. DOI: https://doi.org/10.1016/B978-0-12-822880-7.00024-8, pages 83-95.

59- Fruit stones as green materials for wastewater remediation. Emerging Techniques for Treatment of Toxic Metals from Wastewater. DOI: https://doi.org/10.1016/B978-0-12-822880-7.00024-8, pages 131-156.

Under publication:

Acceptance of the following chapters:

59- Application of guar gum and its derivatives in biomedical field in Encyclopedia of Polymers, Polymeric Materials, and Polymer Technology.

Workshops:

- Emulsion system and their stabilization and application, 26-28 April, 2016, at Egyptian Petroleum Research Institute.
- Next generation of polymer nanocomposites for sustainable development in Egypt, 7-8 December 2016, at Egyptian Petroleum Research Institute.
- Intellectual property and scientific research, organized in collaboration of Wipo and ASRT, 28 November 2019.
- How to write a patent, two workshops organized by EPO in the collaboration with WIPO and EPRI on 5-9/12/2021 and 7-10/3/2022.

Attending Training courses:

✓ The theoretical science and the new designs regarding the new technologies and the techniques of the following systems: (Automated reactors and insitu analysis, Flash DSC, UV/VIS spectrophotometer, Speed extractor).
✓ "Mass spectroscopy" course which was held at Egyptian Petroleum Research Institute, on 2-14 April, 2018.
✓ Flex- Axiom basic, Dynamic modes, Spectroscopy which was held at Egyptian Petroleum Research Institute, on 22-24 October, 2018.
✓ Passing TOT course, approval as a certified trainer.
✓ Passing leaders preparation course.
✓ Online courses on digital marketing with Google.
✓ A three-day course on how to write a patent, organized by Wipo at EPRI on 21-24 October 2021.

Online webinars and courses:

✓ Online training course from the World Intellectual Property Organization (Wipo) and the Academy of scientific research and technology on the intellectual property, author rights and other topics, June 2019.
✓ Online training course from the World Intellectual Property Organization (Wipo) and the Academy of scientific research and technology on introduction to patent treaty, Sep. 2019.
✓ Elsevier Research Academy (35 modules), 2018, 2019, 2020.
✓ Nature Master classes (Peer review and publication ethics), 2018.
✓ Online telegram scientific writing course, 27 July-11 August, 2019.
✓ Online training course entitled: Research writing in sciences by Author aid.
✓ Article publishing process, Elsevier.
✓ Online course on Introduction to ScienceDirect, Mendeley and Researcher Academy(1,5hours)
✓ STDF funding grants, organized by the conference unit, NRC.
✓ Bridging the gap between research and Industry", organized with collaboration between EYAS and ASRT

Teaching and training:

Collaborate with *Tristar teaching and consultation center* in teaching the following courses:

✓**Oil lab.:** Introduction to crude oil chemistry, composition of crude oil, SARA test, Oil lab, Petroleum assay, Water in crude oil, origin of water, problems encountered production and transportation, Depositional problems in crude oil, asphaltenes and resins, Gas chromatography lab, Corrosion problems in the oil processing).

✓**Surfactants and interfacial phenomena:** Characteristics of surfactants, Types of surfactants, Synthesis of surfactants, Application of surfactants, importance of surfactants in petroleum industry).

✓**Chemicals used in petroleum production and processing:** Drilling fluids, Demulsifiers, Emulsifiers, dispersants, Corrosion inhibitors, Scale Inhibitors, Scale removals, H_2S scavengers.

✓**Methods to treat oil spill:** Origin and sources of oil spill, Environmental Impacts of spilled oil, Physical methods of treating oil spill, Mechanical Methods of treating oil spill, Chemical methods of treating oil spill).

- ✓ **Basics of Polymer Science:** Classification of polymers, Different methods of polymerization, Thermal Analysis of polymers, Colligative properties of polymers, Chemical reactions of polymers, Polymers of natural origin, Some applications of polymeric materials).
- ✓ **Recycling of different polymeric wastes:** Classification of waste materials, Recycling of PET wastes into useful products, Recycling of cellulosic materials into useful compounds, Recycling of scrap tyres and used lube oil into high caloric value products).

Training of the students from different Egyptian universities during summer training schedule at EPRI (theoretical lectures, seminars and experimental training).

Online Webinars:

By the collaboration with the environment ambassador, the following webinars were given online:

- ✓ **Valorization of plastic waste for controlling climate changes.**
- ✓ **Effect of plastic wastes on climate changes**
- ✓ **Green Hydrogels in agriculture**
- ✓ **Sustainable (renewable) energy sources**
- ✓

- ✓ **أثرتراكم المخلفات البلاستيكية على البيئة وعلى التغيرات المناخية**

مقالات علمية في جريدة الأهرام العلمي:

- ✓ **أغشية طبيعية لتنقية المياه**
- ✓ **البلاستيك الذكي**
- ✓ **التدوير المتقدم للبلاستيك**

Professional organization memberships:

- ✓ ***BMSN: Board Member of National Scientific society***
- Member in Egyptian society of polymer science and technology.
- Board Member in the Egyptian society of Electron microscopes
- Member in the Permanent scientific committee for applied chemistry.
- ***BMSINT: Board Member of International Scientific society***
- Member in IUPAC.
- Member in Royal Society of Chemistry.
- Member in World Academy of science, Engineering and Technology, Waset.
- Member in the organization for women in science for the developing world (OWSD).
- Member in organization of women in science without borders (WISWB)
- **MSSA: Membership of Scientific Association**
- Senior member in Egyptian Scientists association (ESA)
- Senior Member in International association of educators and researchers (SMIAER).
- Member in Cambridge Scholars
- Member in Asian Council of Science Editors
- Board member in The Egyptian society of electron microscopy
- Board member in Tanks service center

Editorial board of scientific journals, EBSJ:

- ✓ Editor in Applied Surface science journal, Elsevier.

- ✓ A co-editor in Petroleum and Gas Exploration Research (JPGE)
- ✓ Honorary Editor of Journal of Current Petroleum &Chemical Engineering.
- An editor for "Crude Oil Emulsions, Composition and Stability" ISBN: 979-953-307-883-9, 2012.
- Editor in Intech publishing corporation.
- Editorial member of Ariviyal publishing house.
- Editorial board in World academy of science, Engineering and Technology.
- Editorial board member in Journal of Energy, Environmental and chemical Engineering.
- Editorial board member in Letters in organic chemistry.
- Editorial board member in Journal of Energy, Environmental & Chemical Engineering
- Editorial board member in Geofluids

Reviewer membership:

Member Reviewer of the following international journals:

- Journal of petroleum science and engineering.
- Petroleum science and technology.
- Journal of surfactant and detergents
- Journal of separation science and technology
- Journal of Hazardous materials
- Environmental Chemistry Letters
- Applied surface science.
- Journal of polymer research
- International journal of biological macromolecules.
- Egyptian Journal of Petroleum.
- Journal of carbohydrate polymer.
- Journal of advanced research.
- Industrial Crops and Products
- Journal of Environmental Research.
- Journal of Environmental letters.
- Journal of testing and evaluation
- Alfarama Journal of Basic & Applied Sciences (AJBAS)

Other scientific collaboration activities:

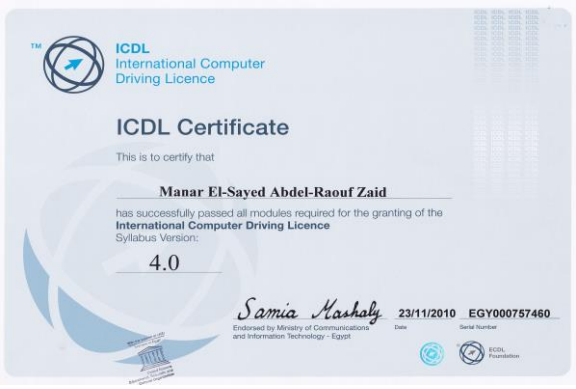
- ✓ ***BMCN: Board Member of National Cultural society***
- ✓ Scientific committee member and referee in Youth science forum held at the NRC on 14-16/1/2020
- ✓ Judge in Egypt science and Engineering fair.
- ✓ Senior Research member in Tanks Service Center at EPRI.
- ✓ university for petroleum Reviewer for Academy of scientific research and technology, Egypt.
- ✓ Reviewer for King Fahd and minerals, KSA.
- ✓ Reviewer for the Science and development fund, STDF. ID: 8432, (42248, 42364, 43433, 42806, 43029, 43245, 43344).
- ✓ Reviewer for the permanent scientific committee for applied chemistry (Four promotion files for professor degree and one for assistant professor degree)
- ✓ Reviewer for IGI-global, editorial discovery.
- ✓ Head of the examination committee of chemicals at EPRI, 2013.

Other achievements:

- ✓ As a senior member in the tanks service center, I contributed to processing of the laboratory of the center with a number of advanced scientific devices and developed different chemical formulations applied in the TSC.
- ✓ As the principal investigator for a research project funded by ASRT, I introduced the atomic force spectroscopy, AFM for the first time in EPRI as a unique one of its models in Cairo and the second allover Egypt. This device has a great scientific importance in material science, petroleum field and biological fields.

Attachments:

1- ICDL Certificate:


ICDL
International Computer
Driving Licence

ICDL Certificate

This is to certify that

Manar El-Sayed Abdel-Raouf Zaid

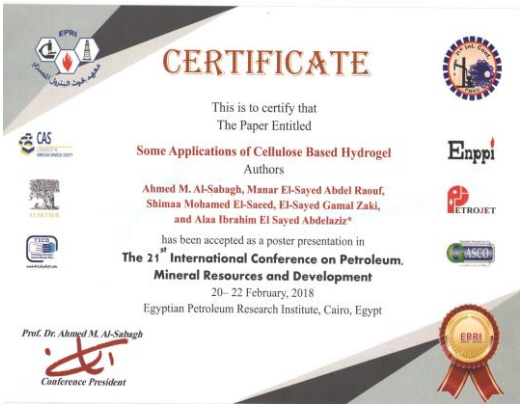
has successfully passed all modules required for the granting of the
International Computer Driving Licence
Syllabus Version:

4.0

Samia Mashaly 23/11/2010 EGY000757460

Endorsed by Ministry of Communications and Information Technology - Egypt

2- Conference participation:


CERTIFICATE

This is to certify that
The Paper Entitled

Some Applications of Cellulose Based Hydrogel

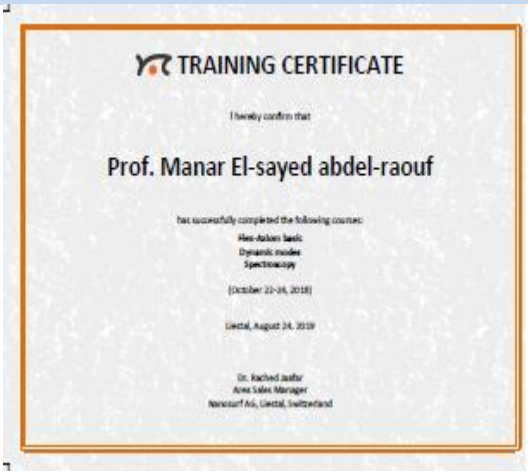
Authors

Ahmed M. Al-Sabagh, Manar El-Sayed Abdel Raouf,
Shimaa Mohamed El-Saeed, El-Sayed Gamal Zaki,
and Alaa Ibrahim El Sayed Abdelaziz*

has been accepted as a poster presentation in
The 21st International Conference on Petroleum,
Mineral Resources and Development
20– 22 February, 2018
Egyptian Petroleum Research Institute, Cairo, Egypt

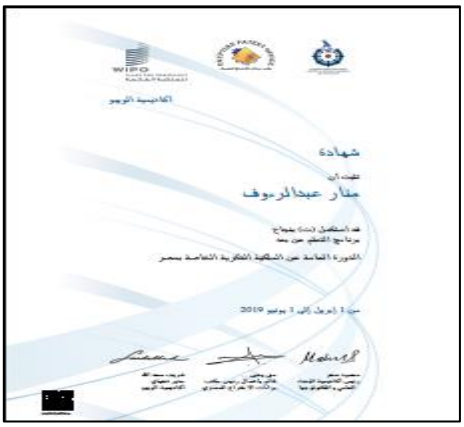
Prof. Dr. Ahmed M. Al-Sabagh
Conference President

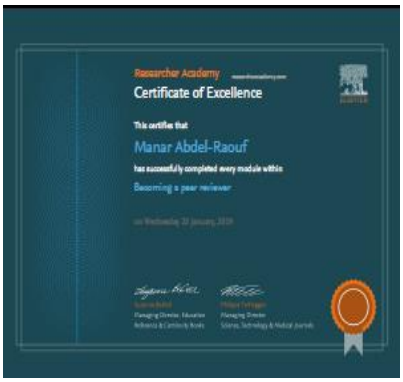
3- Attending training courses:


TRAINING CERTIFICATE

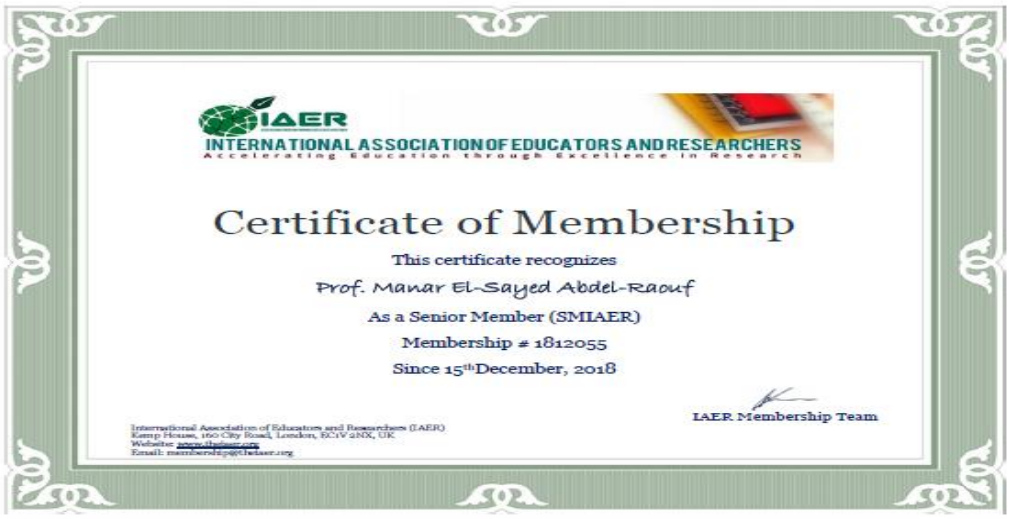
Prof. Manar El-sayed abdel-raouf

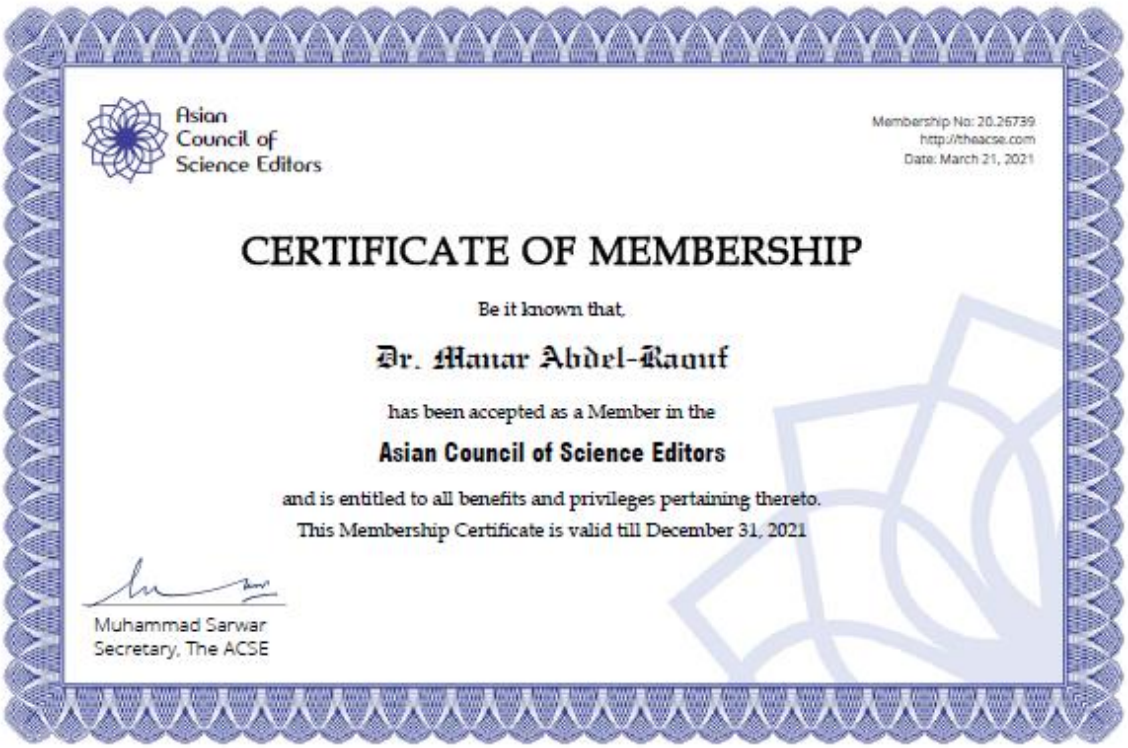
4- Online courses and webinars:





5- Professional societies membership:





Asian Council of Science Editors

Membership No: 20.26739
http://theacse.com
Date: March 21, 2021

CERTIFICATE OF MEMBERSHIP

Be it known that

Dr. Manar Abdel-Raouf

has been accepted as a Member in the

Asian Council of Science Editors

and is entitled to all benefits and privileges pertaining thereto.

This Membership Certificate is valid till December 31, 2021

Muhammad Sarwar
Secretary, The ACSE

2198460000010526252 MANAR ABDEL-RAOUF

INTERNATIONAL UNION OF
PURE AND APPLIED CHEMISTRY

President	Vice President	Secretary General
Prof. Qi-Feng Zhou (China)	Prof. Christopher M.A. Brett (Portugal)	Prof. Richard Hartshorn (New Zealand)
Past President	Treasurer	Executive Director
Prof. Natalia Tarasova (Russia)	Mr. Colin J. Humphris (UK)	Dr. Lynn M. Soby (USA)

1 January 2019

Dear Affiliate,

Affiliate Membership Documents – 2019

I have the pleasure of providing your IUPAC affiliate membership documents as an electronic document for 2019, and thank you for your interest in IUPAC. Additional documents are included:

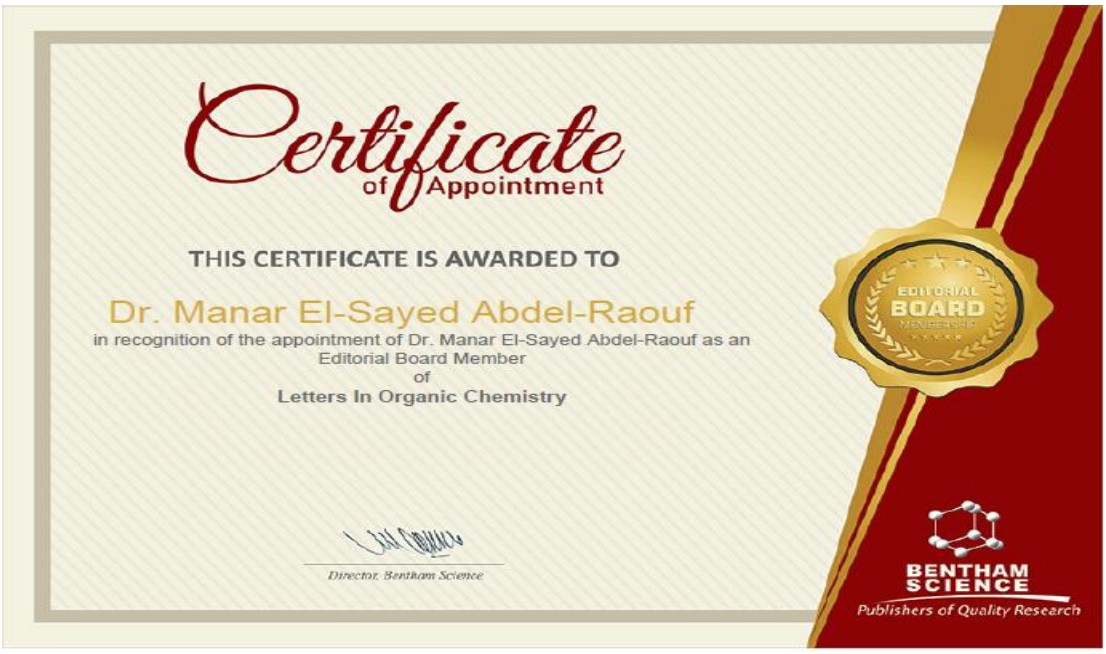
IUPAC Affiliate Membership Certificate 2019
IUPAC Affiliate Membership Card 2019 with your Membership Number

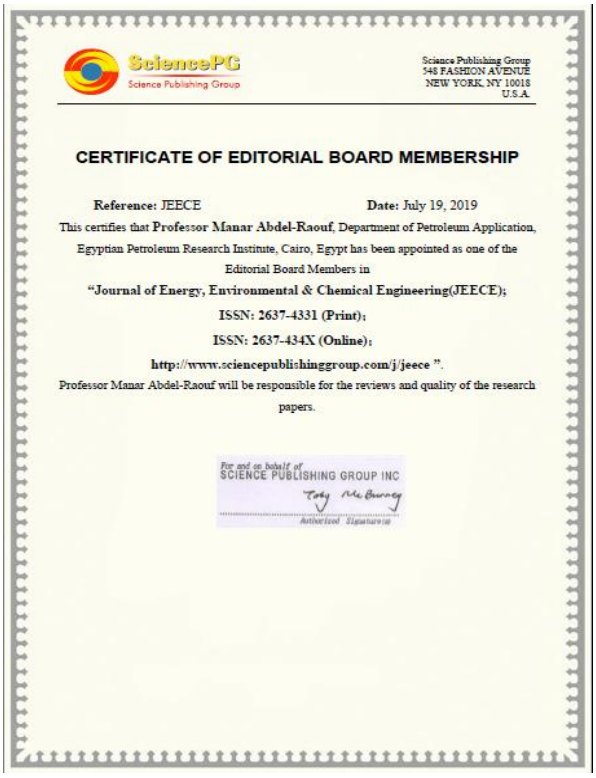
Please sign both the certificate and card and write your name in BLOCK CAPITALS. When claiming your reduction on the cost of IUPAC publications or a reduction in your registration fees at IUPAC endorsed conferences, you may be required to submit a copy of the certificate or present the card. You may print out these documents for your use and record. *Please do not return them to the IUPAC Secretariat.*

Please note that both the certificate and the card are valid until 31 December 2019. You will begin receiving *Chemistry International Digital* access as a benefit of your Affiliate membership in March 2019. If you have added *CI* Print to your membership, you will receive four print issues in 2019, mailed in the second month of each quarter.

Additionally, your contact information will be uploaded and posted on the IUPAC member directory. You will be able to log in and add a photo and update your information. You will also be able to opt out of this option as well as opt out of displaying any of your personal information such as your email address and mailing address.

6- Editorial board Certificates:





SciencePG
Science Publishing Group

Science Publishing Group
548 FASHION AVENUE
NEW YORK, NY 10018
U.S.A.

CERTIFICATE OF EDITORIAL BOARD MEMBERSHIP

Reference: JEECE **Date:** July 19, 2019

This certifies that **Professor Manar Abdel-Raouf**, Department of Petroleum Application, Egyptian Petroleum Research Institute, Cairo, Egypt has been appointed as one of the Editorial Board Members in

"Journal of Energy, Environmental & Chemical Engineering(JEECE);

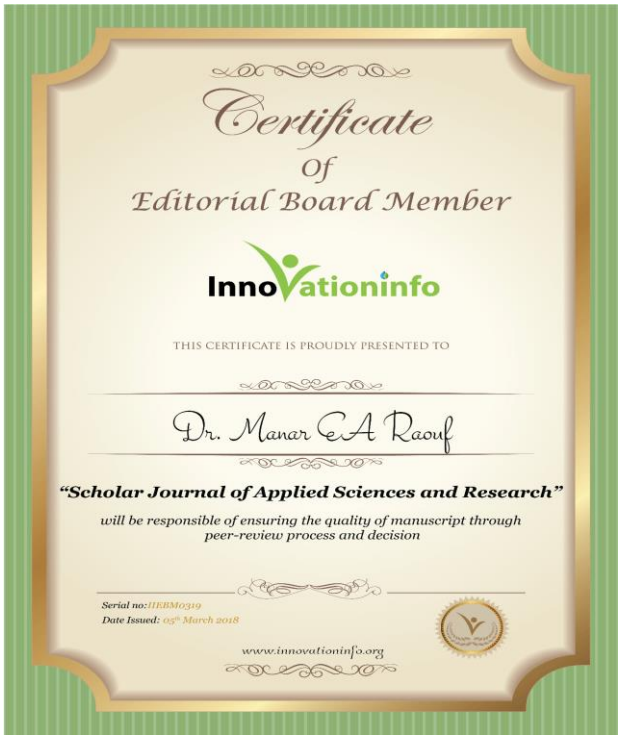
ISSN: 2637-4331 (Print);

ISSN: 2637-434X (Online);

http://www.sciencepublishinggroup.com/j/jeece ".

Professor Manar Abdel-Raouf will be responsible for the reviews and quality of the research papers.

For and on behalf of
SCIENCE PUBLISHING GROUP INC
Authorized Signature



Certificate
Of
Editorial Board Member

InnoVationinfo

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Dr. Manar EA Raouf

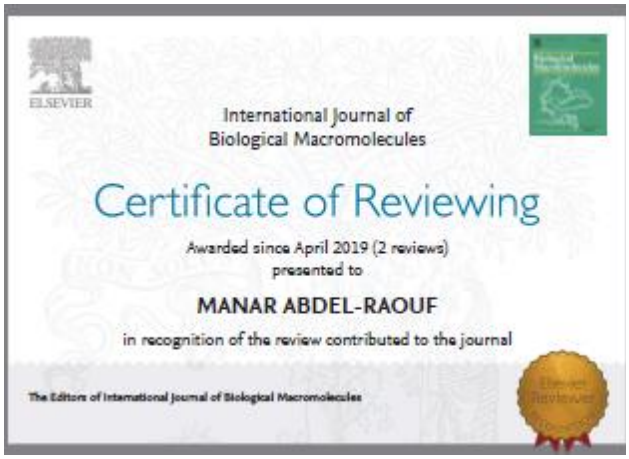
"Scholar Journal of Applied Sciences and Research"

will be responsible of ensuring the quality of manuscript through peer-review process and decision

Serial no:IIEBM0319
Date Issued: 05th March 2018

www.innovationinfo.org

7- Reviewer certificates:



ELSEVIER

International Journal of
Biological Macromolecules

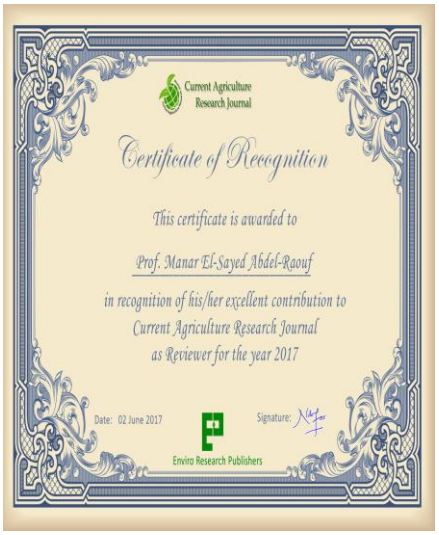
Certificate of Reviewing

Awarded since April 2019 (2 reviews)
presented to

MANAR ABDEL-RAOUF

in recognition of the review contributed to the journal

The Editors of International Journal of Biological Macromolecules



Current Agriculture Research Journal

Certificate of Recognition

This certificate is awarded to

Prof. Manar El-Sayed Abdel-Raouf

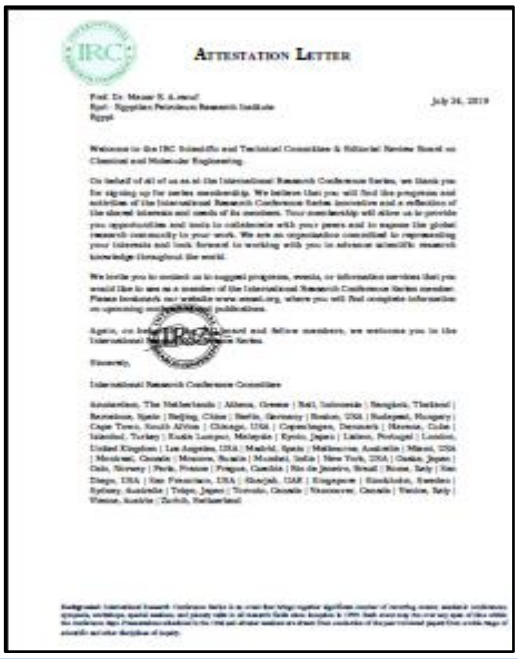
in recognition of his/her excellent contribution to
Current Agriculture Research Journal
as Reviewer for the year 2017

Date: 02 June 2017

Signature:

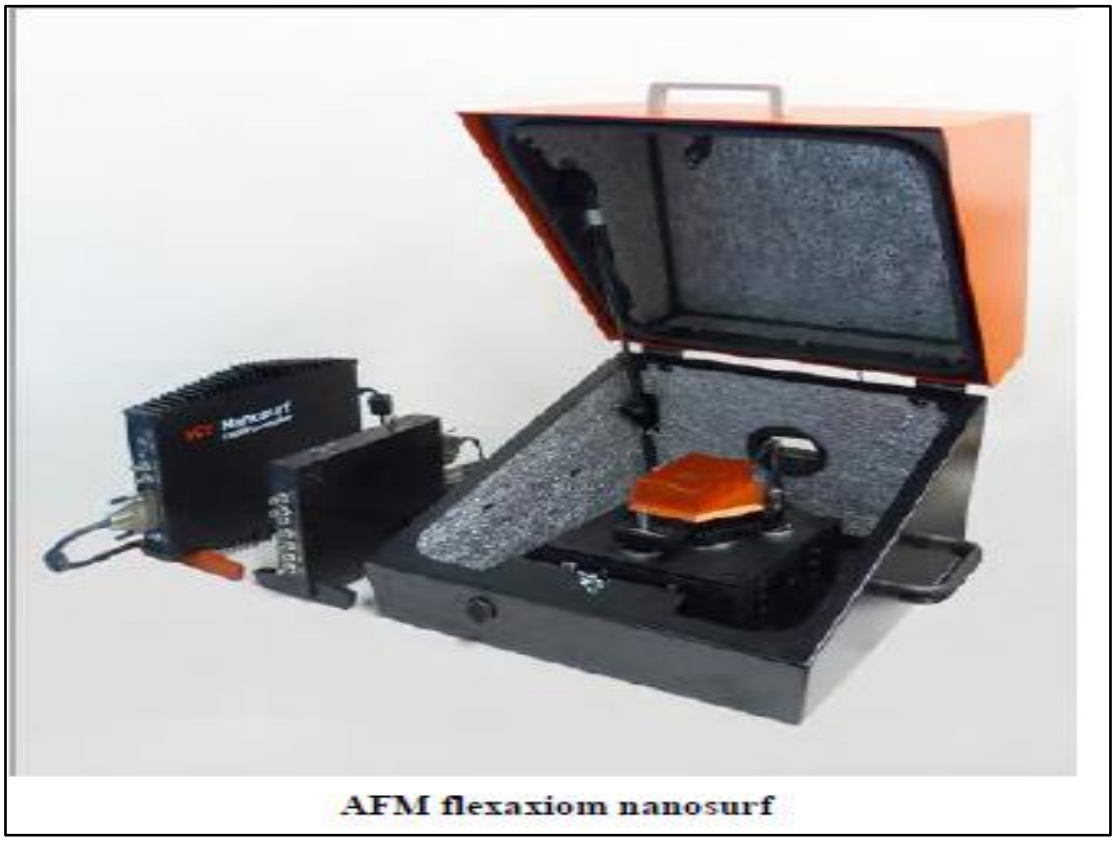
Enviro Research Publishers

8- Arbitrator in the scientific committee of international conferences:



ATTESTATION LETTER

9- Other scientific activities:



AFM flexaxiom nanosurf