

Curriculum Vitae



Personal Information:

Name: Refat Moustafa Hassan Abou-Zied

Title: Professor of Physical Chemistry & Polymer Physics

Date / Place of Birth: March 26, 1943 / Egypt

Marital Status: Married

Nationality: Egyptian

Position: Professor (Emeritus) of Physical Chemistry & Materials Science

Work Address: Chemistry Department, Faculty of Science, Assiut

University, Assiut 71516, Egypt

Telephone: Work: (0020882332200 Ex: 2421)

Home: (+20882055048)

Mobile: (+201116770589)

Fax: 0020882312564, 0020882342708

Academic Qualifications:

- 1- B,Sc.& Diploma in Education: Assiut University (1965)
- 2- B,Sc.: Assiut University (1970)
- 3- M,Sc.: Assiut University (1973)
- 4- Master of Engineering from Research Laboratory for Nuclear Reactors Engineering, Tokyo Institute of Technology, Tokyo, Japan (1978).
- 5- Doctorate of Engineering, from Research Laboratory of Nuclear Reactors Engineering, Tokyo Institute of Technology, Japan (1982)
- 6- Selected by Ministry for Higher Education in Japan (Monbushu) as Postgraduate Fellow Scholarship: Tokyo Institute of Technology, Japan (1975-1982)

Career and Professional Experience:

- Demonstrator of Chemistry, Teachers College, Assiut University, Assiut, Egypt (1966-1970).
- Demonstrator of Chemistry, Faculty of Science, Assiut University, Assiut, Egypt (1970-1973).
- Assistant Lecturer of Chemistry, Faculty of Science, Assiut University, Assiut, Egypt (1973-1975).
- Japanese Monbushu Scholarship (1975-1982).
- Lecturer of Chemistry, Faculty of Science, Assiut University, Assiut, Egypt (1982-1987).
- Associate Professor of Chemistry, Faculty of Science, Assiut University, Assiut, Egypt (1987-1992).
- Professor of Physical Chemistry & Materials Science, Faculty of Science, Assiut University, Assiut, Egypt (1992-2003)
- Emeritus Professor , Assiut University(from March 2003 up till now)

Membership:

- American Chemical Society (ACS, USA).
- Royal Society of Chemistry (RSC, UK)
- New York Academy of Sciences (USA).
- American Association for the Advancement of Sciences (USA).
- Bulletin Academic of Science (Japan)
- Egyptian Society of Polymer Science & Technology (Egypt).
- Chemical Society (Egypt).
- Arab Science and Technology Foundation (ASTF, UAE).
- Naif Arab University for Security Science (Saudi Arabia).

Prizes and Certificates :

- Nominated for Who's Who in the World Editions (USA 1997- 2012 & 2019).
- Research Board of Advisors (ABI, USA).
- Certificate of Appreciation from the American Chemical Society (2012).
- Prize & Certificate from Assiut University for the Best Research Work in Chemistry in 2011 (Reprint on Journal of Physical Chemistry, USA. on the reaction kinetics between Uranium(IV)- Hexachloroiridate(IV) with formation of Ir(0)NPs and the catalysis of enrichment uranium-235).
- Distinguished Scientist in Chemistry, Book about Distinguished People in Assiut City, Edited by Prof. Dr. Rajae El-Tehlaway, the Ex-president of Assiut University & Ex- Governor of Assiut Province, 2011.
- Prize & Certificate from Assiut University for the Best Research Work in Chemistry in 2019 (Reprint in the Journal Molecular Liquids , UK, on the reaction kinetics between silver(I) and Hexachloroiridate(IV) with formation of Ag(0) NPs).

Invitation from International Universities as

Invited Professor

- Invited as a Visiting Associate Professor by, Tokyo Institute of Technology (TIT) President for attending the Golden 100 Years Celebration of TIT as well as to present some seminars

at the Research Laboratory of Nuclear Reactors Engineering about my research work (for about one months in 1991).

- Invited as a Visiting Associate Professor by, Uroaka United Publisher Company in Japan as Consultant for reviewing of Scientific Books publishing (for about one 1992).
- Invited as a Visiting Professor by the Inter Mangolia University, China (2008) for establishing a Memorandum Agreement of Scientific Protocol between our two universities.
- Invited as the First Arabian and African Visiting Professor, Research Laboratory for Nuclear Reactors Engineering, Tokyo Institute of Technology, Japan, for teaching taught Courses in "Advanced Physical Chemistry " for postgraduate students and sharing in Joint Venture Research Project as well as presenting some seminars (for 5 months2009).This visiting was met by successful establishment of a Memorandum Agreement of Scientific Protocol between two our Universities.
- Invited as the First Arabian and African Professor by, Research Center of Materials Science, Nagoya University, Japan, for three months for teaching taught Course in "Advanced Physical Chemistry" for postgraduate students and sharing in Joint Venture Research Project as well as presenting some seminars (2 months 2010).
- Invited as a Visiting Professor by, Research Center of Materials Science (RCMS), Nagoya University, Japan, for four months to teaching taught Course of "Advanced Physical Chemistry" for postgraduate students and sharing in

Joint Venture Research Project as well as presenting some seminars (4 months 2014). This visiting was met by successful establishment of a Memorandum Agreement of Scientific Protocol between two our Universities. This in addition to include only the Faculty of Science undergraduate and postgraduate students of Assiut University into the Nagoya University Program For Academic Exchange of students between Nagoya University and other International Universities for studying in Japan using the English Language for the first time from 2019-2020.

- Invited as the First Foreign Visiting Professor by, Umm Al-Qura University, Makkah Al-Mukarramah, Saudi Arabia Kingdom for teaching taught Courses of "Advanced Physical Chemistry " for Postgraduate Students and presenting some seminars as well as to share in a Joint Venture Research Project (six months 2016).

On Leave Status Contracting :

- Contracted as Associate Professor, at Faculty of Applied Sciences, El-Taief, SAK(1987-1988).
- Contracted Associate Professor, Teachers College, Algeria (1988-1989).
- Contracted as Associate Professor, Faculty of Science, Libya (1990-1991).

Publications and Research Performance :

More than 150 Publications in the most familiar Specialized International Journals (About 15 single author publications in “J Phys Chem (ACS), Omega (ACS), Indust & Engin Chem Res (ACS) ; J. Chem Soc, Dalton Trans (RSC), New J Chem (RSC).; Coord Chem (Japan).; Cand J Chem. ; J Mol. Cat; J Mol Liquids; Cat Commun ; Polym Sci A; J. Appl. Polym Sci ; J Macromol Sci ; J. Memb. Sci ; Polym Inte.; Col . Surf ; Coll Polym Sci ;J Mater Sci ; J Mater Chem ; High Perform. Polym; Materials; Mater Lett ; Carbohydr. Polym. ; Carbohydr. Res.; J Chem Res ; Eur. Polym J.; Acta Polym.; J. Therm.Pyr. ; Polym Degrad Stab ; Thermochim Acta ; Spect Lett ; Acta Chim Hung.; Collect Czech Chem Commun.; Bull Soc Chim. France; Croat Chem Acta ; Bull Polish Acta Sci ; Solution Chem; Radioanal Nucl Chem.Lett.; Inter J Corrs; Advanc Biosci Bioelect; Advanc Biosci Biotechnol; J.Electroanal Chem, JSol Chem, Int J Chem Kinet ; Inorg Chem Commun, Tran Met Chem ; J Bio Trio Corrosion, J Memb Sci Technol, Int J Bio Mscromol ; J Renew Materetc).

Patents :

One patent has been accepted by USA.

Chapters Pablished in Handbooks in USA:

Three Chapters in handbooks in USA publishers (two chapters published in 2016 (Stanford & Nova Publishers) and the third one is published in 2018 (Springer Publisher).. One more chapter is going to appear in 2021.

Publised Papers as Reviews:

Publication of two Reviews Papers

Selection as an International Evaluator for Promotion of Associate Professors and Professors:

Evaluation the qualifications of the submitted documents required for promotion of Associate Professors and Professors for local and international fellows (Egypt, Saudi Arabia Kingdom).

Editorial-Board Members:

- Automatic selection as one member at the International Journal of Chemistry and Advances in Chemical Engineering for more than 25 years ago.
- Automatic selection as a member in the Scientific Research an Essay more than 25 years ago.
- Automatic selection as member in the World Journal of Textile Engineering & Technology.
- Automatic selection as member in the Auctores Journal.
- **I have been apologized to more than 25 invitations as Exclusive Gues Editor, Guest Editor or Member in Editorial Board in Journal in (2019& 2020') such as:**

***Executive Guest Editor by Bentham Science Publishers for "Current Chinese Chemistry" Journal 2020.**

*** Invitation to join the Editorial Board Members of J. Clinical Research and reports , 2020.**

*** Invitation to join the Editorial Board Members in SVOA Materials Science & Technology 2020.**

- * Invitation to join the Editorial Board Members of Journal of Experimental Food Science & Nutrition 2020.**
- * Invitation by Universal Wiser Publisher, Singapore for Editorial Member of Nanoarchitectonics Journal , 2020..**
- * Invitation to join the Editorial Board of Clinical Medical Review Reports, 2020**
- * An invitation to be an Editor of Journal of Nanoscience with Advanced Technology ,2019.**
- *Guest Editor Invitation from Nanomedicine Nanotechnology Journal on Electronic Materials (USA 2019).**
- *Invitation to join the Editorial Board of Current Enzyme Inhibition, 2019.**
- * Invitation to join the Editorial Board Journal Research Update in Polymer Science 2019.**
- * Invitation to join the Editorial Board of Journal of Organic Chemistry Plus 2019.**
- * Guest Editor Invitation from Current Organocatalysis Journal (USA 2019)**
- * Invitation as Editorial Member in Material Science Journal 2019.**
- * Invitation as Editorial Member in Global Journal of Materials Science & Engineering 2019.**
- * Invitation for considering the authority or editing a book publication from IGI Publisher, USA 2019.**
- *Invitation to join the Editorial Board to " EnPress Publisher LLC (USA 2019)**

* Invitation to join the Editorial Board Members, Horizan Journals , JRS, Uk 2018.

* Guest Editor Invitation from Frontiers in Chemistry (ACS 2019).

* Invitation to join the Editorial Board Members of Nutrition and Food Processing 2019.

* Invitation for the authority of editing a book publication from IGI Publisher, USA 2019.

Selection as an Examiner of International M.Sc. & Ph.D.

Thesis's:

Fortunately, I was nominated as international examiner for evaluation both MSc and PhD in the different areas in particularly for the kinetics and mechanisms of redox reaction, electrical properties and corrosion inhibition studies from :

- * Indian Universities & Institutes.
- * Egyptian Universities & Institutes.
- * Saudi Arabia Kingdom Universities

Refereeing of International Projects:

- Arab Science and Technology Foundation (ASTF, UAE).
- Saudi Arabia Projects (SABIC, KSA).
- Egyptian Academic Scientific Research.
- British Council (Newton Fund)

Active and regular Reviewer in each of the following journals:

- Journal of Membrane Science (USA).
- International Journal of Chemical Kinetics (France).

- Colloid & Surfaces (UK). (Colloids and Surface A)
- Journal of Applied Polymer Science (USA).
- Journal of Colloids and Interface Science (USA).
- Journal of Molecular Catalysis (USA)
- Catalysis Communications (USA)
- Environmental Science & Technology (USA)
- Carbohydrate Polymers (USA)
- Carbohydrate Research (UK)
- American Chemical Science Journal (USA)
- Education Journals
- Journal of Molecular Liquids (Japan)
- Journal of Non-Crystalline Solids (UK)
- Journal of Hazardous Material (USA)
- Materials Chemistry and Physics (China & USA) Industrial & Engineering Chemistry Research (ACS, USA)
- Carbohydrate Polymers (UK). (Q1 Scopus)
- Journal of Transition Metal Chemistry (USA).
- Journal of Solution Chemistry (USA).
- Journal of colloid Interface Communications.
- Scientific Research and Essays (Nigeria)
- Fibers and Polymers (South Korea)
- British Journal of Applied Science and Technology (UK)
- Chemical Engineering Journal (Netherland).
- The Chemical Society (Ethiopia).
- Journal of Thermal Analysis and Calorimetry (Hungary).
- Journal of Photochemistry.
- Journal of Nanomaterials.
- British Journal of Applied Science and Technology.

- Colloid and Interface Science Communications
- Journal of Research in Environmental Science and Toxicology (Nigeria).
- African Journal of Engineering Research
- Journal of the Taiwan Institute of Chemical Engineering (Taiwan).
- Journal of Environmental Chemical Engineering.
- Fiber and Polymer Journal (South Korea)
- The Open Catalysis Journal (UAE)
- Journal of Chemical Science and Technology (Japan)
- International Journal of Biochemistry Research Review
- International Journal of Pure and Applied Chemistry
- International Journal of Medicine.
- Assiut University Bulletin for Environmental Researches (Egypt).
- Local Bulletins in Chemistry (Egypt).
- Local Bulletins in Chemistry (Saudi Arabia).

Recent Interest:

- Kinetics and Mechanisms of Redox Reactions for Organic, Inorganic and Macromolecule Substrates.
- Kinetics and Mechanisms of Thermal Degradation of Coordination Biopolymer Macromolecule Complexes.
- Kinetics and Mechanisms of Thermal Degradation of Coordination Biopolymer Macromolecule Complexes.
- Kinetics and Mechanisms of Sol-Gel Transformation (Gelation).

- Electrical Properties of Coordination Bipolymer Macromolecule Complexes.
- Rheological and Morphological Studies on Macromolecules.
- Acidic and Alkaline Catalytic Reactions
- Chemical Equilibria Studies on Ion Exchange Processes.
- Novel Synthesis of Coordination Biopolymer Precursors from Oxidation of Natural and Synthetic Macromolecules by various oxidants.
- Chromatographic Separation.
- Synthesis of Coordination Biopolymer Metal-Complexes of Polysaccharides.
- Spectrophotometric Detection of Some Short-Lived Transient Species Intermediates.
- Crosslinking of Polysaccharides
- Studies on Diffusion Controls.
- New Techniques for Remediation of Wastewater from Toxic Heavy Metal Ions and Carcinogenic Chromium(VI)

Skills:

- 1) Good knowledge of computer programming and applications of Microsoft-software.
- 1) Aware of SEM, TEM, IR, ESR, XRD, TGA, DTA and spectrophotometric techniques and analysis.
- 3) Good experience in dealing with macromolecules in particularly natural polymers such as polysaccharides and synthetic polymers such as poly (vinyl alcohol) and Poly(ethylene glycol).

Apologies for some Invitations

Unfortunately, I am apologized for accepting a lot of invitation to join more Editorial Board Members of many other publishers since I am quite busy, such as:

I. As Guest Editor by Publishers

- Bentham Science Publishers
- Research Signpost Network
- Frontiers in Chemistry (ACS)
- Springer Publisher

II. For Chapter Invitation (in2019 & 2020 for example)

- * Chapter Invitation on "Exopolysaccharides – Methods" from IntechOpen (2019).
- * Chapter Invitation on "Soft Matter: Fundamentals and Applications: Preparation and Application from Intec Open2019.
- * Chapter Invitation on "Electron-Transfer Mechanisms" from Intecopen, 2019.
- * Chapter Invitation from IntecOpen 2019 "Alginate" 2019.
- * Chapter Invitation by Springer" Polysaccharides in Medical Application"
 - Hindawi Publisher

III. Invitation As Guest Editor of Books

- Invitation to submit a book proposal in Physical Sciences for many times by the Cambridge Scholars Publishing2018& 2019.

- Editing eBook "MindMaps in Biochemistry", Benetham Publisher
- Guest Editor of Book Invitation from Springer, by Vijay Thakur,
- Guest Editor of Book at IGI Global, an international academic publisher (USA).
- Invitation to write a book from Siam Publishing Group Ltd, 2019.

International Conferences Invitations:

- Many Personal invitations by name from the most popular International Conferences around the universe as a Plenary, Honorable or invited speaker in particularly from USA, UK, China, Canada, Japan, Spain, Germany, France... etc (More than 70 invitation in the last 2019 and 2020 years) .

Supervision of awarder Post-Graduate Degrees in Chemistry :

Supervisor for both M.Sc.& Ph.D. Degrees (in Egypt, Saudi Arabia).

International Conferences and Symposia:

The attendance one Conference at least every year with presenting one or two papers (from 1977 up till now).

Industrial Projects:

- Preparation of phosphoric acid from calcium super phosphate using ion exchange resin technique (Egyptian Company for Sugar Industry, Egypt).
- Elimination and determination of some contaminants heavy metal cations (Egyptian Company for Sugar Industry, Egypt).
- Preparation of semiconductors from natural polymeric

materials (SABK, Saudi Arabia Kingdom).

- Novel synthesis of keto-derivatives of some natural polymeric materials as bipolymer precursors through oxidation-reduction reactions (SABK, Saudi Arabia Kingdom).
- Vitamin C (Ascorbic acid) as essential nutrient of scurvy. A kinetic study (SABK, Saudi Arabia Kingdom).
- Novel synthesis of natural polymeric membranes and its applications (SABK, Saudi Arabia Kingdom).
- Application of New Natural-Polymeric Cation Exchange Resins of Low Cost and High Efficiency in Treatment of Drainage-Water & Slag for Reusing in Irrigation and Fertilization of Soil Especially the Desert Area (Still under evaluation).
- Synthesis of Novel Natural-Polymeric Cation Exchange Resins of Low Cost, High Efficiency and Wide Applications (Forthcoming).
- British Council Venture Joint Project (Newton Fund) was submitted under investigation.

Impacted Publications in 2019 & 2020

in 2020

- 1) Prospective and comparative novel technique for evaluation the affinity of alginate for binding the alkaline-earth metal ions during formation the coordination biopolymer hydrogel complexes **Refat M.Hassan** ,Int J Biolog Macromol, 165, 1022-1028 (2020).
- 2) Prospective mechanistic on electron-transfer nature for reduction of permanganate ion by ascorbic acid in aqueous acidic solutions **Refat M.Hassan** , J. Mol. Liquids, 309, 113154 ,2020.
- 3) Promising Biocompatible, Biodegradable and Inert Polymers for Purification of Wastewater by Simultaneous Removal of Carcinogenic Cr(VI) and Toxic Heavy Metal Cations: Reduction of Chromium (VI) by Poly(Ethylene Glycol) in Aqueous Perchlorate Solutions . **Refat M. Hassan**, Samia M. Ibrahim , Suzan A. Sayed, Ishaq A. Zaafarany, Omega (ACS), 5, 9, 4424-4432.,2020.
- 4) Orientation on the Mechanistics of Electron-Transfer on Oxidation of Chondroitin-4-Sulfate as Sustainable Sulfated Polysaccharide by Permanganate Ion in Aqueous Perchlorate Solutions, Refat M. Hassan and Samia Ibrahim, J. Renewable Mateials, 2020, doi: [10.32604/jrm.2020.08530](https://doi.org/10.32604/jrm.2020.08530)

in 2019

- 5) Kinetics and mechanistics of reaction between silver (I) and hexachloroiridate(IV) in aqueous acidic media: Evidences of formation of binuclear intermediate complex and Ir(0) nanoparticles with orientation on electron-transfer process, **Refat M. Hassan**, J. Mol .Liquids, 283,292-311 (2019).

- 6) Base-Catalyzed Oxidation of sulfated kappa-Carrageenan by alkaline hexacyanoferrate(III): A Mechanistic Approach of electron-transfer Process, **Refat M. Hassan** and Samia M. Ibrahim, J. Mol. Liquids, 273, 177-182 (2019).
- 7) Oxidation of Some Sustainable Sulfated Natural Polymers: Kinetics and Mechanism of Oxidation of Water-Soluble Chondroitin-4- Sulfate Polysaccharide by Hexachloroiridate(IV) in Aqueous Solutions **Refat M. Hassan** , and Samia M. Ibrahim, ACS Omega, 4,2463-2471 (2019).
- 8) Reduction of tellurium (IV) by ascorbic acid in acid perchlorate solutions. A kinetic and mechanistic approach on the nature of electron-transfer process, **Refat M. Hassan**, Samia M. Ibrahim, Inorg. Chem. Commun. , 104, 176-185 (2019).
- 9) A promising methyl ester of pectic acid polysaccharide in biomedicine and pharmaceuticals applications: Oxidation of methyl ester of pectic acid by alkaline hexacyanoferrate(III). A kinetic and mechanistic orientation, **Refat M. Hassan** , Samia M. Ibrahim, Intr. J. Chem. Kinet., 51,484-496 (2019)..
- 10) A Promising Water-Soluble Synthetic Polymer of High Efficiency and Low Cost as Inhibitor for Inhibition of Metals Corrosion: Inhibition of Magnesium Corrosion by Poly (Ethylene Glycol)in Acidic Media, **Refat M. Hassan**, Samia. M. Ibrahim, Salah A. Salman and Hideo D. Takagi, J. Bio an Tribo Corrsion ,
- 11) Heterogeneous Equilibria: An Equilibrium Study of Ion Exchange Process between Hydrogen Ions and Divalent Metals Counter Ions in Some Coordination Biopolymer Metal-Alginate Gel Complexes **Refat M Hassan** , Samia M Ibrahim, J. Memb. Sci. Technol., Vol. 9 ,No: 198 (2019).

- 12) Diffusion Control Factors Influenced the Ion Exchange between Sodium Counter Ions of Alginate and some Trivalent Metal Cations in the Sol-Gel Transition Process **Refat M Hassan,** J. Memb. Sci. Technol. Vol. 9 No: 198 (2019).

Some other Selected Papers