

Curriculum Vitae

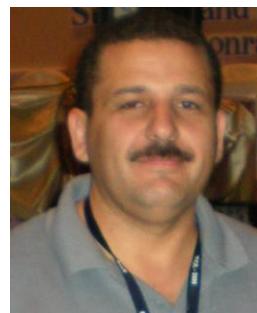
Prof. Dr. Raed Ahmad Ghanem

Professor of Physical Chemistry

Prof. Dr. Raed Ahmad Ismail Ghanem

Professor of Physical Chemistry

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Biography:

I received my B.Sc. in Chemistry in 1990 from Jordan University, Ph.D. with the honor degree (summa cum laude) in 1999 from Seville University in Physical chemistry. I worked as a Post-Doctorate fellow at Lund University (2002). Department of Chemical Physics. Sweden, and as research scientist at University of Surrey (2003), Polymer Research Center (UK) and as assistant professor in Physical chemistry at Al albayt University, Chemistry Department (2003) and as associated professor in Physical Chemistry at Hail University (2013), and professor of Physical chemistry at Al al-bayt University, Chemistry Department (2018).

My research activities include chemical kinetics, theoretical calculation and spectroscopy. Activities include: (i) Photochemistry of organic compound (ii) Spectroscopy and chemical reactions of alkaloids; chemical and photochemical properties, chemical and photochemical reaction mechanisms, transient absorption studies. (iii) Drug Interaction with the

polymer surface experimental and theoretical calculation (iv) host–guest interaction chemistry (v) Artificial photosynthesis and electron transfer study of on photosystem II (vi) photo stability and pho degradation of Flame retardant material.

Personal details:

First name	Raed Ahmad Ismail Ghanem
Place of birth	Amman – Jordan
Nationality	Jordanian and UK permanent resident
Professional Status	Professor of Physical Chemistry/Department University of Al AL Bayt –Jordan
E-mail-addresses	raedsa@yahoo.com , raedag@aabu.edu.jo

Language: English. Spanish and Arabic

Education:

1. **Research scientist**, PRC, university of surrey. 2002-2004 **United Kingdom**
2. **Post Doctorate** at the chemical center -Department of chemical physics Lund University-**Sweden. 2000-2002**
3. Ph.D. Physical Chemistry, 1999. University of Seville, **Spain, (Sobresaliente cum laude, Excellent With honor)**
4. **Ph.D courses** in Physical Chemistry, 1998, University of Seville, **Spain (Sobresaliente cum laude, Excellent With honor)**
5. B.Sc. Chemistry 1990. The University of Jordan, Amman, **Jordan.**

ADMINISTRATIVE POSITION

1. **Dean of Faculty of Science, Al al Bayte University, Sept 2018 till now.**
2. **Vice Dean of Faculty of Science, Al al Bayte University, Sept 2015 to Sept 2017.**
3. **Chairman of the Department of Chemistry, Al al Bayte University; Sept. 2014 to Sept 2015. 2009.**
4. **Chairman of the Department of Chemistry, Al al Bayte University; Sept. 2014 to Sept 2006. 2008**

ACADEMIC POSITION

1. **Professor of Physical Chemistry**, January 2018. Chemistry Department. Faculty of Science. Al al-Bayt University
2. **Associate Professor of physical chemistry**-2010-2013, Hail University. Saudi Arabia
3. **Associated Professor of Physical Chemistry, 2010**. Chemistry Department .Faculty of Science. Al al-Bayt University
4. **Assistant Professor of physical chemistry**, 2003. Chemistry Department .Faculty of Science. Al al-Bayt University
5. **Research Scientist Polymer**. 2002-2004 Research Center -University of Surrey-UK
6. **Invited lecturer at chemistry**, 2004. Department, Fribourg University – Switzerland
7. **Postdoctoral fellow**. 200-2002. Lund University, **Sweden**. Department of Chemical Physics
8. **PH.D student. 1995-1999**University of Seville, Spain (kinetic and Photo chemical oxidation of alkaloids).
9. **Researcher** at the Chromatography Laboratory at the Department of Analytical chemistry, **1995**. University of Seville, Spain (New analytical method for β drug compound)
10. **Researcher and chemical Analyst** at Dar Al Dawa. 1993-1995. Jordan. (Quality control chemist and then a researcher to develop analytical method and solubility study)

Industry Development

- 1) Worked for DAD (Dar Al Dawa) Jordan. (Quality Control Department & Research Develop Department) to Develop a new analytical method and drug interaction study
- 2) Worked for Bestpack (UK) R&D Department in cooperation with PRC research center to study and improve the Inhaler Performance
- 3) Worked for Flame Retardant Exposure Consortium (FREC) UK to study the Flame retardant exposure
- 4) Worked for AKZONOBLE .UK to study the release of Flame retardant from the foam
- 5) Worked for the analytical chemistry Department -Seville University Spain to Develop a new analytical method and photo stability

Honors

- 1. Scholarship from Jordanian Army Force to get B.Sc. in chemistry at the University of Jordan.1987-1990**
- 2. Scholarship from International Arab Student Assistance1987-1990**
- 3. Scholarship from AECI (Agencia Espanola de Cooperacion 1997-1999. Internacional) to get a PhD degree in physical chemistry at the University of Seville**

Teaching Experience

During my presence at several institutions (Al al Bayt University (Jordan), Surrey University_(UK), Lund University (Sweden) and Seville University (Spain), I acquired a good background in teaching the following graduate and undergraduate courses:

1. Basic Quantum chemistry
2. Advanced Quantum chemistry
3. Quantum mechanics and Spectroscopy
4. Kinetics and electrochemistry
5. Practical Physical Chemistry.
6. Basics of Physical Chemistry.
7. Nuclear and radiochemistry
8. Computer application in chemistry.
9. Advanced course on Literature survey in chemistry
10. General Chemistry.
11. General Chemistry for Nursing Students.
12. Practical General Chemistry

Course Development:

- 1) Co-authored the laboratory manual for the physical chemistry Al-AL Bayt university
- 2) Co-authored the computer Application on chemistry course.
- 3) Mathematics for Chemistry Students

Memberships:

1. President of Jordanian Chemical Society.
2. American Chemical society.
3. A member of different committees in the Chemistry Department and the Faculty of Science at Al-al Bayt University (Study plans, graduated study, scientific research committee. .strategic plans, community service, academic quality assurance, computer and software)

Community service

1. Coordinator of the organizing committee of the International conference of chemistry & Biosciences (ICCB2017) held at the Al-al Bayte University (2017)
2. Chairman of the organizing committee of the 15th Jordanian chemical conference held at the Al-al Bayte University (2017)
3. Chairman of the organizing committee of the 14th Jordanian chemical conference held at the Al-al Bayte University (2014)
4. Member of the Organization committee of The International Conference On Materials in Jordan Under the Title: Materials in Jordan: Future Prospective 4 - 6 March 2009 German-Jordanian University Amman-Jordan.
5. Chairman of the organizing committee of the 7th Jordanian chemical conference held at the Al-al Bayte University (2007)
6. Chairman of the organization committee if the scientific day of the faculty of science-university of Al-al-Bayte for the years of 2006, 2007 and 2008
7. Chairman of the community service committee in the Chemistry Department and the Faculty of Science for several years

Contributions to Conferences:

- 1) The 2nd international conference on Advances in Biophysics (ICAB 2016).
The effect of pH and beta cyclodextrin on the photophysical properties of Lamortigine. **Raed Ghanem. Los Anglos USA march 2016**
- 2) The 14th Jordanian conference. Chemistry Department- Al BATRA University
- 3) The 4th International congress of chemistry and environment, ICCE-2009.
Kinetics of Thermal and Photolytic Segregation of Decabromodiphenyl Ether in back-coated textile samples. **Raed Ghanem. Thailand January 2010**
- 4) The 12TH ASIAN CHEMICAL conference. Photosensitization and electron transfer from the zinc Phtalocynine to Colloidal SnO/ ZnO semiconductors.
Raed Ghanem. Malaysia August 2008
- 5) The 9th Jordanian chemical conference, Chemistry Department- Al Hasmiate University 2009 **Photochemistry of terbutaline Raed Ghanem** , Amal Khazaleh
- 6) The 8th Jordanian chemical conference, Chemistry Department- Al BATRA University 2008 **Drug interaction with polymer surface Raed Ghanem** , Hutaf Baker, and Amal Khazaleh
- 7) The 7th Jordanian chemical conference, Chemistry Department- Al Al Bayt University 2007 **Determination of hexbromocyclododecan (HBCD) in backcoated textile preparation Raed Ghanem** , Hutaf Baker, and F.A.Delmani
- 8) The 7th Jordanian chemical conference, Chemistry Department- Al Al Bayt University 2007 **Determination of decabromodiphenyl ether in back**

- coated textile preparation** Hutaf Baker and **Raed.Ghanem**
- 9) The 7th Jordanian chemical conference, Chemistry Department- Al Al Bayt University 2007 **Chemical and photochemical transformation of Colchicine and colchicines derivatives** Mubeen abu Sief, **Raed Ghanem** and Hutaf Baker
 - 10) The Queen Elizabeth II Conference Centre London, England 27-28th January 2004 **Understanding Flame Retardant Release to the Environment** Gary Stevens, **Read Ghanem**, J Thomas, University of Surrey and A Horrocks, B Kandola, Bolton Institute, UK
 - 11) V Congreso de Fotoquímica de RSEQ, Universidad de Malaga - Spain (2001) **fotografía de la yohimbina**. M. Balon, **Raed.Ghanem** and C. Carmona
 - 12) Femtochemistry –V-conference, Toledo, Universidad de Toledo Spain (2001). **Light driven multistep electron transfer in a tyrosine-ruthenium-complex anchored to TiO₂ nanoparticles**. **Raed Ghanem**, Jie Pan, Yunhua Xu, Johan Andersson, Tomáš Polívka, Licheng Sun, Villy Sundström.
 - 13) XVI Reunión Nacional DE Espectroscopia, Universidad de Sevilla -Spain (1998) **Oxidación química de la betacarbolina**, **Raed Ghanem**, Carmen Carmano and M, Balon.
 - 14) 1st International conference on Pharmaceutical Industry, Pharmacy College- Jordan Jordan university of science and technology Jordan (1994) **Determination of a multivitamins using HPLC method- simple and direct analytical method** .**Raed Ghanem**
 - 15) 1st International conference on Local Material industry, Chemical engineering Department-University of Jordan (1993) **Quality control on Pharmaceutical industry** Raed Ghanem.

Published Work

1. **Effect of pH and β -cyclodextrin on the photophysical properties of lamotrigine**. **Raed Ghanem**, Fakhri Yousef, Omar abu awwad Turkish Journal of Chemistry. 2018. DOI: 10.3906/kim-1706-12
2. **Effect of pH and α -, β - and γ -cyclodextrin on the spectral properties of etoricoxib: spectroscopic and molecular dynamics study** Fakhri O. Yousef .**Raed Ghanem** .Noura H. Alshraa.Nosayba M. Al Omari .Khal ed Bodoor. Musa I. El-Barghouthi. J Incl Phenom Macrocycl Chem . 2017 88:171–180 DOI 10.1007/s10847-017-0715-7
3. **Evaluation of the Interaction of Micronized Salbutamol Sulphate Particles with a Polymer Surface**. **Raed A. Ghanem** and Abdel-Aziz Matani. American Chemical Science Journal 13(1): 1-7, 2016, Article no.ACSJ.24107

4. **Spectroscopic and photophysical properties of terbutaline . Raed Ghanem**, Hutaf Baker, Amal Al-Khazalah and Abdel Aziz Matani. Jordan Journal of Chemistry Vol. 11 No.3, 2016, pp. 184-197
5. **Chemical Oxidation of Phthalmic Drug Timolol by Peroxodisulfate. Raed Ahmad Ghanem**. American chemical sciences 2015, DOI: 10.9734/ACSj/2015/18782
6. **Kinetics of thermal and photo-initiated release of tris (1-chloro-2-propyl) phosphate (TCPP) from polyurethane foam Materials. Raed Ahmad Ghanem**., Jordan Journal of Chemistry Vol. 10 No.1, 2015, pp. 20-33
7. **Kinetics of Carvedilol Oxidation by Peroxodisulfate. Raed A. Ghanem**., American Chemical Science Journal.7(1): 47-59, 2015, Article no.ACSj.2015.060
8. **Kinetics of thermal and photo-initiated release of tris (1,3-dichloro-2-propyl) phosphate (TDCP) flame retardant from polyurethane foam materials. Raed A. Ghanem**, Journal of Environmental Science and Health, Part A: Toxic/Hazardous Substances and Environmental Engineering, 50:8, 855-865, DOI: 10.1080/10934529.2015.1019807
9. **Study on removal behavior and separation efficiency of naturally occurring bentonite for sulfate from water by continuous column and batch methods. Hutaf Mustafa Baker and Raed Ahmad Ghanem**. European Journal of Chemistry 6 (1) (2015) 12-20
10. **Kinetics of the release of antimony trioxide from the backcoated textile preparation. Raed Ahmad Ghanem**. European Journal of Chemistry 6 (1) (2015) 71-77
11. **Determination of Antimony trioxide from the back coated textile preparation.** Hutaf M. Baker and Raed Ghanem., Eurasian J Anal Chem 9(1): 8-14, 2014.
12. **Experimental and Theoretical Evaluation on the Effect of the Terminal Side Chain of a Polymeric Surfactant on the Inhibition Efficiency of Aluminum Corrosion in Acid Medium** S.M. Sayyah, M.M. El-Deeb S.S. Abd El-Rehim, R.A. Ghanem, S.M. Mohameda., Portugaliae Electrochimica Acta 2014, 32(6), 417-429 DOI: 10.4152/pea.201406417

13. **Kinetics Study of the Chemical Oxidation of Pindolol by Peroxodiphosphate. Raed Ghanem.**, Asian Journal of Chemistry; Vol. 26, No. 24 (2014), 8488-8496.

14. **New non ionic polymeric surfactants as corrosion inhibitors for the C-Steel alloy in hydrochloric acid corrosive medium.** R.S.Abdel Hameed ; Omar.M.Ismaile; Fayez M. Eissa ; and **Raed.Ghanem**. Pelagia Research Library. Der Chemica Sinica, 2012, 3(1):236-248

15. **Kinetics of thermal and photolytic degradation of decabromodiphenyl ether (BDE 209) in backcoated textile. R. Ghanem,** F.A.Delmani., Journal of analytical and applied pyrolysis. 98 (2012) 79–85

16. **Determination of phenol in wastewater by using low cost modified Jordanian natural zeolite. Column and batch experiment** Hutaf M. Baker, **Raed Ghanem**, Ahmad al-Shuraá. Eurasian J Anal Chem 7(3): 134-149, 2012

17. **Examining the potency of suggested inhibitors for the phosphatase activity of the human soluble epoxide hydrolase by molecular dynamics simulations** Musa I. El-Barghouthi , Abdullah I. Saleh, Ahmad Ghandour, **Raed Ghanem**, Martin Zacharias Journal of Molecular Structure: THEOCHEM 944 (2010) 97–104.

18. **Photochemical Transformation of Colchicine: A Kinetic study. Raed Ghanem*,** Hutaf Baker, Mobeen Abu Seif, Raed A. Al-Qawasmeh, Abdl-Azizi Mataneh and Samer Ibrahim Al- J Solution Chem (2010) 39: 441–456 DOI 10.1007/s10953-010-9515-z

19. **Kinetics of Thermal and Photolytic segregation of Hexabromocyclododecane in backcoated textile samples. Raed Ghanem.** Jordan Journal of Chemistry (2009) 4(2):171-181.

20. **Kinetics of pindolol oxidation by peroxodisulfate. Raed Ghanem.** Ameen Hadi. J Solution Chem (2009) 38: 641–658.

21. **Evaluation of treated natural zeolite for the removal of o-chlorophenol from aqueous solution.** Hutaf M. Baker, **Raed Ghanem .** Desalination, Volume 249, Issue 3, 2009, P 1265-1272

22. **Determination of Decabromo-diphenyl Ether in back coated textile preparation**
Raed Ghanem and Hutaf Baker. Journal of Hazardous Materials 162 (2009). 249-253.
23. **Photosensitization of SnO₂/ZnO semiconductors with zinc-phthalocyanine.**
Raed Ghanem. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy. 72 (3). 2009. 455-459.
24. **Polymerization of vinyl monomers via transition metalbased catalysts bearing bis(imino)pyridine ligands.** Adnan S. Abu-Surrah, Raed Ghanem and Abdussalam K. Qaroush. Well-defined Metal Complexes-Catalyzed Polar Polymer Synthesis, 2008
25. **Determination of Hexabromocyclododecan in Backcoated Textile preparation**
Raed Ghanem, Hutaf Baker and F.A.Delmani. Asian Journal of Chemistry 19 (2) 2007. 921-928.
26. **Photosensitization of Colloidal TiO₂ with Zinc Phtalocynine.** Raed Ghanem. Asian Journal of Chemistry 19(2) 2007. 897-911
27. **Tuning proton coupled electron transfer from tyrosine: A competition between concerted and step-wise mechanisms.** Martin Sjödin, Raed Ghanem, Tomas Polivka, Jie Pan, Stenbjörn Styring, Licheng Sun, Villy Sundström and Leif Hammarström. Physical Chemistry Chemical Physics, 2004, 6(20), 4851 – 4858.
28. **Light-Driven Tyrosine radical Formation from a Ruthenium-Tyrosine complex anchored to Nanoparticle TiO₂.** Raed Ghanem, Yunhua Xu, Jie Pan, Tobias Hoffmann, Johan Andersson, Tomáš Polívka, Torbjorn Pascher, Licheng Sun, Villy Sundström *Inorg. Chem.*, 41 (24), 6258 -6266, 2002.
29. **Light driven multistep electron transfer in a tyrosine-ruthenium-complex anchored to TiO₂ nanoparticles.** Raed Ghanem, Jie Pan, Yunhua Xu, Johan Andersson, Tomáš Polívka, Licheng Sun, Villy Sundström. In Femtochemistry And Femtobiology (Ultrafast Dynamics in Molecular Science). Word scientific, 2002.

30. **Chemical and photochemical oxidation of tetrahydrobetacarboline.** C. Carmona, R. Ghanem, M. Balòn, M. A. Muñoz, and P Guardado. *J.Photochem.Photobiol. A* 135, (2000) p.171.
31. **Mechanism of the oxidation of yohimbine and two of its 7H-substituted derivatives by sodium peroxodisulfate.** C. Carmona, R. Ghanem, M. Balòn, P. Guardado, and M. A. Muñoz *J. Chem. Soc. Perkin Trans. 2*(200), p. 839
32. **Photophysics and photochemistry oxidation of yohimbine in moderately concentrated sulfuric acid methanol-water media.** R.Ghanem C.Carmona, P.Guardado, M.Muñoz, and M. Balòn *J.Photochem.Photobiol. A* 129, (1999) p.57.
33. **Oxidation of 2,3-dimethylindole by peroxophosphates.**R. Ghanem, C. Carmona, M. A.Muñoz, P. Guardado, and M. Balòn *J. Chem. Soc. Perkin Trans. 2* (1996), p. 2197.
34. **Determination of beta-blocker drugs in pharmaceutical preparations by non-suppressed ion chromatography.** R.Ghanem, M.A.Bello, M.Callejòn, and A.Guiràum *J. Pharmaceut Biomed. Anal* 15, (1996), p. 383.
35. **Electron transfer study of ruthenium complex cncord to nanocrystalline TiO₂**
R. Ghanem, Y. Xu, T. Hoffmann, T. Polívka, B. Åkermark, L. Sun, V. Sundström.
Proceedings of the *Vth Femtochemistry Conference*, Toledo -Spain (September 2001).
36. **Oxidación fotoquímica de la yohimbina.** R. Ghanem, M. Balón, C. Carmona, P. Guardado y M. Muñoz. *Proceedings of the XVI Reunión Nacional de Espectroscopia*, Sevilla – Spain (1998).
37. **Oxidación química y fotoquímica de la tetrahido beta acarbilina.** C.Carmona R.Ghanem, M. Balón, M. Muñoz, P. Guardado y M.Galan. *Proceedings of the V Congreso de fotoquímica de la RSEQ*, Torremolino(Málaga) -Spain(April-2001).

Master thesis directed

1. Guest-host interaction between cyclodextrin and etoricoxib, Noura Hamad Alshraa, 2017
2. Photophysical Properties of Terbutaline, Amal Fahed Alkhazalah 2010
3. chemical oxidation of pindolol, Ameen Hadi, 2008
4. Chemical and photochemical transformation of colchicines, Mubeen abu seif, 2007
5. removal of phenol and phenol derivative using a modified Jordan clay, Ahmad al Sharaah 2007

REFERENCES

1. Professor Manuel Balon Almieda; (Ph.D. Thesis Advisor).
Department of Chemistry, Seville University, Spain
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2. Professor Carmen Carmona; (Ph.D. Co-Thesis Advisor).
Department of Chemistry, Seville University, Spain
e-mail: balon@fafar.us.es
3. Professor Dr. Adnan S. Abu-Surrah (Professor of Inorganic & Materials Chemistry) Department of Chemistry Hashmit University
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