

## Curriculum vitae

**DR. IHSAN A. SHEHADI**

### **Nationality**

Citizen of the United States of America

### **Email Address**

ishehadi@sharjah.ac.ae

### **Academic and Administrative Experience**

- 7/2022-8/2022 **Acting Dean** of the College of Sciences, University of Sharjah, Sharjah.
- 7/2021-9/2021 **Acting Dean** of the College of Sciences, University of Sharjah, Sharjah.
- 9/2020-present **Vice Dean of the College of Sciences**, University of Sharjah, Sharjah. Main duties: managing and supervising all college activities and staff.
- 9/2019-2020 **Assistant Dean of the College of Sciences**, University of Sharjah, Sharjah. Main duties: assisting the dean in managing and Supervising all college activities and staff.
- 9/2014-2019 **Chairman** of the Department of Chemistry, University of Sharjah, Sharjah. Main duties: Managing and Supervising all Departmental activities and staff.
- 1/6/2017-2018 **Chairman** of the Department of Academic Accreditation, Deanship of Quality Assurance, Institutional Effectiveness and Accreditation, University of Sharjah, Sharjah. Main duties: Managing and Supervising all accreditation files and processes of all program in the University of Sharjah
- August 2017 & August 2016 **Acting Dean of Academic Support services**: Main duties: Managing and Supervising all activities related to Registrar's office, Admissions, Libraries, Central Laboratory unit and IT
- 1/2023-present **Professor of Physical Chemistry**, Department Chemistry, University of Sharjah, Sharjah, UAE. Main Duties: Teaching advanced level courses in the discipline, conducting high quality research in chemistry and Chemical education, and contributing to community related services and activities
- 9/2014-1/2023- **Associate Professor** of Chemistry, Department Chemistry, University of Sharjah, Sharjah, UAE. Main Duties: Designing and teaching high-level courses in Physical, Inorganic and General chemistry (theory and practical), conducting high quality research in chemistry and Chemical education and contributing to community services and activities.
- 9/2009-2013 **Assistant Professor**, Department Chemistry, University of Sharjah, Sharjah, UAE  
Main Duties: Designing and teaching high-level courses in applied chemistry (theory and practical), conducting high quality research, writing and referring research proposals and contributing to community services and activities.
- 9/2002-9/2009 **Assistant Professor**, Department of Chemistry United Arab Emirates University, Al-Ain, UAE. Main duties: conducting high quality research in Sciences and education, designing and assessing new curricula, performing in- and out- of classroom activities, writing and refereeing research proposals and papers..  
**Administrative duties:**  
-Academic Coordinator: In charge of the all-academic activities in the Department including the management of the Blackboard suit for instructional purposes (2007/2008) (2007/2008)

- Coordinator of the academic assessment and Development committee through which the Canadian Society Accreditation of the B. Sc. Program in Department of Chemistry was achieved (2003/2007)
- Coordinator of the academic planning and curriculum design based on the ACS guidelines at the Department (2004-2006)
- Coordinator of the Student's activities at the Department of Chemistry (2004/2005).
- Supervisor of the Environmental students' Association (2004-2006).
- Co-founder and supervisor of the chemistry club in the Department. (2004-2007)

1/2/2009-2/5/09 **Adjunct assistant professor**, George Mason University-RAK Campus, UAE. Main duties include teaching Advanced Organic Chemistry course and supervise the Organic Chemistry Lab.

22/6/2002-25/8/02 **Visiting professor**, Northeastern University, Department of Chemistry, MA 02115, U.S.A Northeastern University, Department of Chemistry, Boston, Massachusetts. Main duties: Teachings Inorganic Chemistry and Inorganic Chemistry lab.

### Languages:

English and Arabic.

### Experimental Techniques

FT-IR spectroscopy, UV/VIS spectroscopy, capillary electrophoreses, GC-MS and Supercritical Fluid (SCF)-CO<sub>2</sub> techniques.

### Computational Experience

1992-1997 Density Functional Theory (DFT); plus a variety of semi-empirical methods; modeling and dynamics of molecules and proteins and bio-informatics protocols and tools.

### Education

1993-1997 **Ph.D.** in Chemistry, majoring in Computational/ bio computational Chemistry. Northeastern University, Department of Chemistry, Boston, Massachusetts. U.S.A. Title of the Ph. D Dissertation: "Computational Chemistry for Molecular Design: Part I: Molecules with nonlinear Optical Properties, Part II: Models for Chemically modified proteins"

1986-1990 **Bachelor of Science**, majoring in chemistry, *The American University of Beirut, Beirut, Lebanon.*

### Research interest

- Heterogeneous and homogeneous Catalysis and their applications to petroleum petrochemical industry, Physical chemistry, Computational chemistry and Chemical Education.

### Computer Skills

Programming experience: C/ C++. Operating systems: Linux, UNIX, MS/PC-DOS, VMS, and Windows. Numerous general-purpose software packages and database systems including, Discover, SYBASE SQL, MathCAD, Gaussian16, Schrödinger, word-processors, spread sheets, utilities, editors, Web Page Design and chemo/bio-informatics tools and protocols.

### Publications

1. Gourishetty Srikanth; Anil Ravi; Anusha Sebastian; Jobi Joseph; Monther A. Khanfar; Mohammed I El-Gamal; Raed A. Al-Qawasmeh; **Ihsan A. Shehadi**; Scott McN. Sieburth; Imad A. Abu-Yousef; Amin F.

- Majdalawieh; Taleb H. Al-Tel. Diastereoselective Synthesis of Camptothecin-like Scaffolds Construction of a New Class of Pseudo-Natural Products. *European Journal of Organic Chemistry* (2023) 26 (13), e202300080.
- Abdelfattah Hassan, Fawzy AF Mubarak, **Ihsan A Shehadi**, Ahmed M Mosallam, Hussain Temairk, Mohamed Badr, Aboubakr H Abdelmonsef. Design and biological evaluation of 3-substituted quinazoline-2,4(1H,3H)-dione derivatives as dual c-Met/VEGFR-2-TK inhibitors. *Journal of Enzyme Inhibition and Medicinal Chemistry* (2023), 38 (1), 2189578- 2189593. <https://doi.org/10.1080/14756366.2023.2189578>.
  - Abuflaha, Rasha K., Yousef, Fakhri O.b, Ghanem, Raeda Send mail to Ghanem R., Al-Sou'od, Khaldouna, **Shahdi, Ihsan A.**, Almashaqbeh, Omar K.a., Al-Refai, Mahmouda. Investigation of Solvent Effect and H-Bonding on Spectroscopic Properties of 1-(3-Amino-6-(2,5-dichlorothiophen-3-yl)-4-phenylfuro[2,3-b]Pyridin-2-yl) Ethenone: Experimental and Computational Study. *Journal of Fluorescence* (2023), 1-12.
  - Kamrul Hasan, **Ihsan A Shehadi**, Reshma G Joseph, Shashikant P Patole, Abdelaziz Elgamouz.  $\beta$ -Cyclodextrin-Functionalized Fe<sub>3</sub>O<sub>4</sub>-Supported Pd-Nanocatalyst for the Reduction of Nitroarenes in Water at Mild Conditions. *ACS Omega* (2023) 8 (26), 23901-23912.
  - Ayat Al Nimer, Abdel-Nasser Kawde, Abdelaziz Elgamouz, **Ihsan Shehadi**, Ayman AbdelHamid. Copper enhanced guanine electrochemical signal for nucleic acids detection in municipal tertiary wastewater. *Arabian Journal of Chemistry* (2023) 16 (9), 105091-105106.
  - Anas J Rasras, Raed A Al-Qawasmeh, Mohamed El-Naggar, **Ihsan Shehadi**, Mahmoud M Elaasser, Yaseen A Al-Soud. Design, synthesis and antimicrobial assessments of aminoacetylenic-piperazine nitroimidazole hybrid compounds. *Zeitschrift für Naturforschung C* (2023) 78 (3-4), 113-121.
  - Abdelaziz Elgamouz, Abdel-Nasser Kawde, Ihsan A Shehadi, Sareh Sayari, Sarah Ali Abdullah Mohammed, Aya Abdelrazeq, Chahlaa Naser Nassab, Ayman A AbdelHamid, Kamrul Hasan. Modified Graphite Pencil Electrode Based on Graphene Oxide-Modified Fe<sub>3</sub>O<sub>4</sub> for Ferrocene-Mediated Electrochemical Detection of Hemoglobin. *ACS Omega* (2023) 8 (13), 11880-11888.
  - Noser, A. A.; **Shehadi, I. A.**; Abdelmonsef, A. H.; Salem, M. M., Newly Synthesized Pyrazolinone Chalcones as Anticancer Agents via Inhibiting the PI3K/Akt/ERK1/2 Signaling Pathway. *ACS Omega* (2022), 7 (29), 25265-25277.
  - Rashdan, H. R. M.; **Shehadi, I. A.**, Triazoles Synthesis & Applications as Nonsteroidal Aromatase Inhibitors for Hormone-Dependent Breast Cancer Treatment. *Heteroatom Chemistry* (2022), 5349279.
  - Rasras, A. J.; Al-Qawasmeh, R. A.; El-Naggar, M.; **Shehadi, I.**; Elaasser, M. M.; Al-Soud, Y. A., Design, synthesis and antimicrobial assessments of aminoacetylenic-piperazine nitroimidazole hybrid compounds. *Zeitschrift für Naturforschung C* (2022).
  - Mouselly, M. M.; **Shehadi, I. A.**; Choi, A. Y.; Han, C.; Mohamed, A. A., Aryldiazonium gold salts as efficient oxidants for polymerization of anilines. *Research on Chemical Intermediates* (2022). <https://doi.org/10.1007/s11164-022-04689-7>
  - Hasan, K.; **Shehadi, I. A.**; Ahmed Bagudu, K.; Osama Mohamed Elmabrouk, N.; Elgamouz, A.; Patole, S. P.; Al-Qawasmeh, R. A., Magnetic silica surface functionalized palladium catalyst: A modular approach for C-C cross-coupling reactions in water. *Applied Surface Science* (2022), 571, 151369. <https://doi.org/10.1016/j.apsusc.2021.151369>
  - Hassan, E. A.; **Shehadi, I. A.**; Elmaghaby, A. M.; Mostafa, H. M.; Zayed, S. E.; Abdelmonsef, A. H., Synthesis, Molecular Docking Analysis and in Vitro Biological Evaluation of Some New Heterocyclic Scaffolds-Based Indole Moiety as Possible Antimicrobial Agents. *Frontiers in Molecular Biosciences* (2022), 8. <https://doi.org/10.3389/fmolb.2021.775013>
  - Shehadi, I. A.**; T. Abdelrahman, M.; Abdelraof, M.; Rashdan, H. R. M., Solvent-Free Synthesis, "In Vitro and In Silico Studies of Novel Potential 1,3,4-Thiadiazole-Based Molecules against Microbial Pathogens". *Molecules* (2022), 27(2), 342. <https://doi.org/10.3390/molecules27020342>
  - El-kordy, A.; Elgamouz, A.; Lemdek, E. M.; Tijani, N.; Alharthi, S. S.; Kawde, A.-N.; **Shehadi, I.**, Preparation of Sodalite and Faujasite Clay Composite Membranes and Their Utilization in the Decontamination of Dye Effluents. *Membranes* (2022), 12 (1), 12. <https://doi.org/10.3390/membranes12010012>
  - Rasras, A. J.; **Shehadi, I. A.**; Younes, E. A.; Jaradat, D. s. M. M.; AlQawasmeh, R. A., An efficient synthesis of furan-3(2H)-imine scaffold from alkynones. *Royal Society Open Science* (2021), 8 (11), 211145. DOI: <https://doi.org/10.1098/rsos.211145>
  - Nassab, Chahlaa; Arooj, Mahreen; **Shehadi, Ihsan**; Marutheri Parambath, Javad Basil; Kanan, Sofian; Mohamed, Ahmed. "Lysozyme and Human Serum Albumin Proteins as Potential Nitric Oxide

- Cardiovascular Drug Carriers: Theoretical and Experimental Investigation". *The Journal of Physical Chemistry*, (2021), 125(28), pp. 7750–7762
18. Mahreen Arooj, **Ihsan Shehadi**, Chahlaa N Nassab, Ahmed A Mohamed. “Computational insights into binding mechanism of drugs as potential inhibitors against SARS-CoV-2 targets”. *Chemical Papers*, (2021) 1-11. DOI: 10.1007/s11696-021-01843-0
  19. Huda R. M. Rashdan, **Ihsan A. Shehadi**, Mohamad T. Abdelrahman, and Bahaa A. Hemdan. “Antibacterial Activities and Molecular Docking of Novel Sulfone Biscompound Containing Bioactive 1,2,3-Triazole Moiety”. *Molecules*, (2021) 26 (16), 4817.
  20. Rashdan, huda; **shehadi, ihsan**; Abdelmonsef, Aboubakr. “Synthesis, Anticancer Evaluation, Computer-Aided Docking Studies and ADMET Prediction of 1,2,3-Triazolyl-Pyridine hybrids as Human Aurora B Kinase Inhibitors”. *ACS Omega* 6 (2), 1445-1455 (2021). <http://goi.org/10.3390/molecules26164817>
  21. Abdelaziz Elgamouz, **Ihsan Shehadi**, Abdelrahman Assal, Alaa Bihi and Abdel-Nasser Kawde. “Effect of AgNPs Internal Solution on the Sensing of Mercury(II) by an Ion-Selective Electrode based on a Thiol Coordination from Cysteine as Ionophore”. *Journal of Electroanalytical Chemistry*. (2021), 895, 115443. <https://doi.org/10.1016/j.jelechem.2021.115443>
  22. Mahreen Arooj, **Ihsan Shehadi**, Chahlaa N. Nassab, Ahmed A. Mohamed.” Physicochemical stability study of protein–benzoic acid complexes using molecular dynamics simulations”. *Amino Acids*, (2020) 52, 1353-1362.
  23. Rafea Naffa, Jakob Gaar, Wenkai Zhang, Catherine Maidment, **Ihsan Shehadi**, Alaitz Etxabide, Geoff Holmes, Iman Kaviani and Margaret Brimble. “Rapid and simultaneous analysis of advanced glycation end products on silica hydride column: Comparison of ultraviolet, fluorescence, and mass spectrometry detectors”. *Sep Sci plus* (2020), 3, 11-12. DOI: 10.1002/sscp.202000077
  24. Vunnam Srinivasulu, Paul Schilf, Saleh Ibrahim, **Ihsan A. Shehadi**, Omar G. Malik, Scott Sieburth, Monther A. Khanfar, Mohamad Hamad, Imad A. Abu-Yousef, Amin F. Majdalawie and Taleb H. Al-Tel. “Divergent Strategy for Diastereocontrolled Synthesis of Small- and Medium-Ring Architectures”. *Journal of Organic Chemistry*, (2020), 85(16), 10695–10708. <https://doi.org/10.1021/acs.joc.0c01244>
  25. Al-Qawasmeh, R.A., Hussein, N.A., **Shehadi, I.**, Khanfar, M.A., Salameh, B.A. “Design and Synthesis of Aminoacetylenic Indole and Carbazole Hybrid Compounds”. *Chemistry Select*, (2020), 5(22), pp. 6834-6839. <https://doi.org/10.1002/slct.202001146>
  26. Rashdan, H.R.M., Abdelmonsef, A.H., **Shehadi, I.A.**, Soliman, A.M.M., Mahmoud, H.K.
  27. “Synthesis, Molecular Docking Screening and Anti-Proliferative Potency Evaluation of Some New Imidazo[2,1-b]Thiazole Linked Thiadiazole Conjugates” *Molecules*, 2020, 25(21). <https://doi.org/10.3390/molecules25214997>
  28. **Ihsan A Shehadi**, Fatima-Azzahra Delmani, Areej M Jaber, Hana Hammad, Murad A AlDamen, Raed A Al-Qawasmeh, Monther A Khanfar. “Synthesis, Characterization and Biological Evaluation of Metal Adamantyl 2-Pyridylhydrazone Complexes. *Molecules*, 2020, 25(21). <https://doi.org/10.3390/molecules25112530>
  29. **Shehadi, I.**, Abla, F., Wakefield, B., Arooj, M., Mohamed, A.A. “Facile protic hydration of acetonitrile to protonated acetamide at oxygen mediated by chloroauric acid: insights from experimental and calculations”, *Research on Chemical Intermediates* (2020), 46(1), pp. 593-607
  30. *Shehadi, I. A.*; Rashdan, H. R. M.; Abdelmonsef, A. H., Homology Modeling and Virtual Screening Studies of Antigen MLAA-42 Protein: Identification of Novel Drug Candidates against Leukemia—An In Silico Approach. *Computational and Mathematical Methods in Medicine* 2020, 2020, 8196147. <https://doi.org/10.1155/2020/8196147>
  31. Elgamouz, A., Tijani, N., **Shehadi, I.**, Hasan, K., Kawam, M.A.-F., Erratum to “Characterization of the firing behaviour of an illite-kaolinite clay mineral and its potential use as membrane support”. *Heliyon* (2019) 5(8), (S2405844019359419), (10.1016/j.heliyon.2019.e02281).
  32. Adnane Lahnafia, Abdelaziz Elgamouz<sup>b,\*</sup>, Najib Tijania, **Ihsan Shehadi**. “Hydrothermal synthesis of zeolite A and Y membrane layers on clay flat disc support and their potential use in the decontamination of water polluted with toxic heavy metals”, *Desalination and Water Treatment*, 182 (2020) 175–186.
  33. Abdelaziz Elgamouz, Najib Tijani, **Ihsan Shehadi**, Kamrul Hasan, Mohamad Al-Farooq Kawam. “Dataset of multiple methodology characterization of an illite-kaolinite clay mineral for the purpose of using it as ceramic membrane supports” *Data in Brief*, 29 (2020) 105300
  34. Hasan, K., **Shehadi, I.A.**, Al-Bab, N.D., Elgamouz, A. Magnetic chitosan-supported silver nanoparticles: A heterogeneous catalyst for the reduction of 4-nitrophenol, *Catalysts*, 9(10),839, 2019. <https://doi.org/10.3390/catal9100839>

35. Elgamouz, A., Tijani, N., **Shehadi, I.**, Hasan, K., Al-Farooq Kawam, M. Characterization of the firing behaviour of an illite-kaolinite clay mineral and its potential use as membrane support, *Helvion*, 5(8),e02281, 2019. <https://doi.org/10.1016/j.helivon.2019.e02281>
36. Srinivasulu, Vunnam; **Shehadi, Ihsan**; Khanfar, Monther; Malik, Omar; Tarazi, Hamadah; Abu-Yousef, Imad; Sebastian, Anusha; Baniodeh, Nabil; O'Connor, Matthew; Al-Tel, Taleb. "One-Pot Synthesis of Diverse Collections of Benzoxazepine and Indolopyrazine Fused to Heterocyclic Systems", *Journal of Organic Chemistry*, 2019. <https://DOI: 10.1021/acs.joc.8b02878>
37. Rafea Naffaa, Geoff Holmesa, Wenkai Zhanga, Catherine Maidmenta, **Ihsan Shehadi** and Gillian Norrisb. "Comparison of liquid chromatography with fluorescence detection to liquid chromatography-mass spectrometry for amino acid analysis with derivatisation by 6-aminoquinolyl-N-hydroxysuccinimidyl-carbamate: Applications for analysis of amino acids in skin", *Arabian Journal of Chemistry*, (2020), 13 (2), p.p.3997-408 <https://doi.org/10.1016/j.arabjc.2019.05.002>
38. Ahmed Almehdi, Ali El-Keblawy, **Ihsan Shehadi**, Mohamed El-Naggar, Ismail Saadoun, Kareem A. Mosa & Purushothaman C. Abhilash." Old leaves accumulate more heavy metals than other parts of the desert shrub *Calotropis procera* at a traffic-polluted site as assessed by two analytical techniques". *International Journal of Phytoremediation*. 21, (12), (2019). <https://doi.org/10.1080/15226514.2019.1619164>
39. Samuel Orefuwa, Mohamed El Naggar, **Ihsan Shehadi**, Mohamed M. Chehimi, and Ahmed A. Mohamed , *J. Nanosci. Nanotechnol.* 17, 4063–4068 (2017).
40. A. Lafi, **I. Shehadi**, M. El Naggar, H. Alawadhi, H. Abdou and A. Mohamed, Forensic Nanotechnology: Engineering Polyaniline Nanocomposites for Latent Fingerprints Development, *J. of Nanoscience and Nanotechnology*, 17, 2865–2872 (2017)
41. Shaikha S. Alneyadi, **Ihsan A. Shehadi** and Ibrahim M. Abdou, Synthesis and anti-proliferative activity of pyridine O-galactosides and 4-fluorobenzyl analogues, *Heterocycl. Commun.*, 21 (5), 285-290 (2015).
42. Mohamed El Naggar , **Ihsan Shehadi** , Hanan E. Abdou , Ahmed A. Mohamed, Gilded Hope for Medicine, *Inorganics*, 3 (1) 2015, doi:10.3390/inorganics30x000x.
43. **Ihsan A. Shehadi**, An Overview on Recent Trends in Catalysis, *Journal of Thermodynamics and Catalysis*, 5 (1) 2014.
44. Abbas Khaleel, **Ihsan Shehadi**, and Ali Al-Marzouqi, Unique textural properties of titanium-doped alumina via sol-gel synthesis under non-acidic conditions, *Materials Letters* 68 (2012), 1-13.
45. Abbas Khaleel, **Ihsan Shehadi**, and Ali Al-Marzouqi, Catalytic conversion of chloromethane to methanol and dimethyl ether over mesoporous alumina, *Fuel and Processing Technol.* 92 (2011) 1783–1789.
46. Salman Ashraf, **Ihsan Shehadi**, Syed Marzouk and Brian Murphy, An Integrated Professional and Transferable Skills Course for Undergraduate Chemistry Students, *Journal of Chemical Education*, 88, 1, (January 2011), 44-48.
47. Rafea Naffaa, **Ihsan Shehadi**, and Tala Al Akeshah, Removal of pesticide waste water using residues from activated carbon from olive mill wastes arbones (jift), *Proceeding of the Sharjah International Conference on Nuclear and Renewable Energy* (SHJ-NRE11), (2011).
48. Abbas M. Khalil, **Ihsan A. Shehadi** and Mariam H. Al Shamsi, catalytic activity of chromium-metal mixed oxide, *Journal of non-crystalline Solid*, 356 (2010) 1282-1287.
49. Ali H. Al-Marzouqi, Hanan M. Elwy , **Ihsan Shehadi**, and Abdu Adem, Physicochemical properties of antifungal drug-cyclodextrin complexes prepared by supercritical carbon dioxide and by conventional techniques, *J. Pharm. Biomed. Analytical* , 49, (2009), 227-233.
50. Abbas M. Khalil, **Ihsan A. Shehadi** and Mariam H. Al Shamsi, Sol-gel synthesis and catalytic activity of chromium-iron mixed oxide, *Colloid and Surfaces A-Physicochemical and Engineering Aspects*, 355 (2010), 75–82.
51. **I. A. Shehadi**, M. Maamari and M. A Rauf, Excess Molar Enthalpies, Entropies, Gibbs Free Energies, Refractive Indices of the Ternary Systems; 1- Butanol+N, N- Dimethyl Formamide (DMF)+Ethyl Acetate at 298.15 K, *Journal of International Scientific Research*, 18, (2009), 1-9.
52. Muhammad A. Rauf, **I. Shehadi**, Amal Ahmed and Ahmed Al-Zamly, Removal of Methylene Blue from aqueous solution by using gypsum as a low cost adsorbent, *International Conference on Applied Chemistry- World Academy of Science*, Engineering and Technology, (2009) ISSN: 2070-3740.
53. **I. A. Shehadi**, THEMATIC Analysis for Functional Ion Channel, *International Journal of Quantum Chemistry*, 11 (107), 2075-2081 (2007).

54. Ali H. Al-Marzouqi, Ayser Solieman, **Ihsan Shehadi**, and Abdu Adem, Influence of the Preparation Method on the Physicochemical Properties of Econazole- $\beta$ -Cyclodextrin Complexes, *Journal of Inclusion Phenomena and Macrocyclic Chemistry*, 60, (2008), 85-93.
55. M. A Rauf, **I. A. Shehadi** and Walaa W. Hassan, Studies on Removal of Neutral Red on Sand from aqueous solution and its kinetic behavior, *Dyes and Pigments*, 75, 723-726 (2007).
56. **I.A. Shehadi**, THEMATICS for Structural Genomics, *Global Journal of Biotechnology and Biochemistry*, 1 (1), 28-34 (2006).
57. **I. A. Shehadi**, A. Abyzov, A. Uzun, Y. Wei, L. F. Murga, V. Ilyin, and M. J. Ondrechen, Active Site Prediction for Comparative Model Structures with THEMATICS, *Journal of Bioinformatics and Computational Biology*, 3, 127-143 (2005).
58. **Ihsan A. Shehadi**, Alper Uzun, Leonel Murga, Valentine Ilyin and Mary Jo Ondrechen, THEMATICS is Effective for Active Site Prediction in Comparative Model Structures, *Conferences in Research and Practice in Information Technology*, Australian Computer Society: Sydney, New South Wales, Australia, 29, 209-215 (2004)
59. **Ihsan A. Shehadi**, Huyuan Yang and Mary Jo Ondrechen, Future Directions in Protein Function Prediction, *Molec. Bio. Rpts*, 29, 329-335(2002).
60. Alessandro Ferretti, Alessandro Lami, Leonel F. Murga, **Ihsan A. Shehadi**, Mary Jo Ondrechen and Giovanni Villani, Theory of Electro absorption Spectroscopy in Pyrazine Bridged Ru Dimers, *Journal of The American Chemical Society*, 121 2594-2596(1999).
61. **Ihsan A. Shehadi**, Leonel F. Murga, Mary Jo Ondrechen, and Jan Linderberg Third-Order Nonlinear Optical Properties of Correlated Bridged Polymers, *Chem. Phys. Lett.* 291 325-332 (1998).
62. Leonel F. Murga, **Ihsan A. Shehadi** and Mary Jo Ondrechen, Models for chemical control of the third nonlinear optical properties of finite polymers, *Trends in Chemical Physics*, Vol 7 233-245 (1999).
63. David E. Budil, Luftur Khundkar, **Ihsan A. Shehadi**, and Mary Jo Ondrechen, Introducing a Practice-Oriented Approach in the Physical Chemistry Instructional Laboratory, *Journal of Chemical Education*, 76 601-602 (No. 5 May 1999).

#### Edited Books:

- Hamid M. K. Al Naimiy, Maamar Bettayeb, Hussein M. Elmehdi, and **Ihsan Shehadi**. *Future Trends in Education Post COVID-19: Teaching, Learning and Skills Driven Curriculum*, 1<sup>st</sup> edition. Springer Nature Singapore (2023), ISBN: 9789819919260, pp. 364.

#### Book Chapters:

- Book Title: *Future Trends in Education Post COVID-19: Teaching, Learning and Skills Driven Curriculum*. Chapter 15: ***Research Based Learning (RBL), Curriculum and Courses in Undergraduate Science Education in the Post COVID-19***. Hussein M. Elmehdi, Raed AL Qawasmeh, Abdel Aziz Gamouz, Mahreen Arooj, Kamrul Hasan and **Ihsan A. Shehadi**. pp. 185-195. Springer Nature Singapore (2023).
- Book Title: *Future Trends in Education Post COVID-19: Teaching, Learning and Skills Driven Curriculum*. Chapter 23: ***Learning Chemistry at the University of Sharjah: Before, During, and After the Covid-19 Pandemic***. Abdel-Nasser Kawde, Abdelaziz Elgamouz and **Ihsan Shehadi**. pp. 298-311. Springer Nature Singapore (2023)
- Book Title: “*Food, Medical, And Environmental Applications of Nanomaterials*”. Chapter 03: ***Robust Organometallic Gold Nanoparticles in Nanomedicine Engineering of Proteins***”, Ahmed Mohammed, Mahreen Arooj, Mehavesh Hameed, Seema Paniker, **Ihsan Shehadi**. Elsevier Inc., 2021.

#### Professional Reports:

- “Annual Report for the College of Sciences” University of Sharjah, 2011-2019.
- Accreditation Report for the B. Sc. Program, Department of Chemistry, University of Sharjah, 2015.
- Laboratory Safety Manual, Central Laboratory Unit, University of Sharjah, 2011.
- “Canadian Society of Chemistry (CSC) Accreditation report”, UAEU, 2008.
- “Academic assessment report for the Department of chemistry at UAEU”, UAE University, 2007-2008.

- “Academic Performance and assessment report for the Department of chemistry at UAEU”, UAE University, 2006-2007.
- “Summary of the academic performance of the first cycle of academic assessment”, UAEU, 2005-2006
- “Annual Report for the Department of Chemistry” UAEU, 2004-2005.

#### Grants:

- University of Sharjah Research Council, Computational Mutagenesis Studies to Explore the Drug Resistance Mechanisms for Nonsmall Cell Lung Cancer (NSCLC) Treatment”. No. (22021440117), 2022.
- University of Sharjah Research Council Synthesis and characterization of new series of NCN and NNN pincer type ruthenium/iridium complexes and their application in catalytic acceptor less alcohol dehydrogenation (AAD). No.(22021440127) , 2022.
- University of Sharjah Research Council, “Encapsulation of hydroxy Chloroquine into a biodegradable Nanoemulsions, using an edible Argan oil and cyclodextrin for promising treatment (relieve symptoms) of COVID-19 virus infection”. No. (21021440106), 2021.
- University of Sharjah Research Council, “Physiological, Biological and Molecular Responses of Vegetable Crops to Metal Nanoparticles: A Phytotoxicity Assessment”. Grant No. **2102145099, 2021.**
- University of Sharjah Research Council, “Developing Sustainable Catalyst via Effective Anchoring of Cu(II) Schiff Base Complexes on Magnetic Chitosan and Their Application in C-C and C-N Coupling Reactions Forwards Organic Synthesis”. Grant No. **1902144082, 2019.**
- University of Sharjah Research Council, Grant No.XXX-2015
- United Arab Emirate University, Research Council, Grant no. **05-03-2-11/05**
- United Arab Emirate University, Research Council, Grant no. is **01-02-7-12/04**
- United Arab Emirate University, Research Council, Grant no. **08-03-2-11/03**
- United Arab Emirates University, Research council, Grant no. **02/11-2-16**
- Emirates Foundation Grant, U.A.E, Al Murshid Al Sageer, 2008 (approved grant of 750,000 AED/year)
- Emirates Foundation Grant, U.A.E, “Catalytic Conversion of Halogenated Methane to Higher Hydrocarbons: Route to Cleaner Energy Source and Valuable Chemicals from Natural Gas”, 2009, **(2009/081)**

#### Patents:

“THEMATICS: A Simple Computational Method for the Identification and Characterization of Enzyme Active Sites,” Mary Jo Ondrechen, James G. Clifton, Dagmar Ringe, Ronald J. Williams, Robert P. Futrelle, Wenxu Tong, David E. Budil, Jaeju Ko, Leonel F. Murga, Ihsan A. Shehadi, and Huyuan Yang. U.S. Utility Patent Application, pending.

#### Presentations in Conferences:

- Sharjah International Conference on Physics of Material (SICPAM), April 22-24, 2023. Copper-induced Electrochemical Signal Amplification for the Detection of Adenine in Wastewater Samples”. Ayat Al Nimer, Abdel-Nasser Kawde, Abdelaziz Elgamouz, Ihsan Shehadi.
- 5<sup>th</sup> HCT INTERNATIONAL MULTI-CONFERENCES (ASET) ADVANCES IN SCIENCE & ENGINEERING TECHNOLOGY (IEEE), February 20 – 23 2023 – Dubai, UAE.
- The Third International conference of the Arabs’ and Muslims’ History of Science, University of Sharjah, December 5-7, 2017, Sharjah, UAE. Al-Mehdi Ibrahim, Hussein M Elmehdi and **Ihsan Shehadi** , Beyond Conspiracy Theory: An insight into reasons for the downfall of Arabs’ and Muslims’ thrive for scientific innovation and discovery (Invited paper and talk)
- Kawde, A., Elgamouz, A., and Shehadi, I. "Learning Chemistry at University of Sharjah: Before, During and After the Covid-19 Pandemic" The Sharjah International Conference on Education in Post Covid19, University of Sharjah, UAE, Mar. 14-16, 2022.
- THE 255<sup>th</sup> AMERICAN CHEMICAL SOCIETY, Blood biocompatible conjugate of super robust and water-soluble gold-aryl functional nanoparticles with bovine serum albumin, U.S.A, 2018.

- THE 254<sup>th</sup> AMERICAN CHEMICAL SOCIETY, Conjugates of water-soluble gold-carbon nanoparticles with proteins, U.S.A, 2017.
- 250<sup>th</sup> American Chemical Society conference, August 16-20, 2015, Boston, U.S.A: Gold diazonium reduction on unusual substrate.
- 250<sup>th</sup> American Chemical Society conference, August 16-20, 2015, Boston, U.S.A: Synthesis and characterization of diazonium Tetrachloroaurate(III) precursors for surface grafting.
- NANOTECH MEET Tunisia 2014 joint international conferences(NANOTECH MEET TUNISIA 2014), Tunisia on Apr 24 - 26, 2014: Quality Structure activity relationships study for selected metal oxide/ mixed metal oxide catalysts.
- 11<sup>th</sup> European-Asian Chemistry Conference, Jordan, October 6-10, 2010. Nanostructured Chromium-Iron mixed oxides: textural properties and acid-base behavior.
- EuropaCat IX, Catalysis for Sustainable world, Salamanca, Spain August 30- September 4<sup>th</sup>, 2009. Sol-Gel Synthesis and Catalytic Activity of Chromium-Iron Mixed Oxide Catalysts (Oral)
- Theory and Application of Computational Chemistry (TACC 2008), Shanghai, China, September 23<sup>rd</sup>, 2008. Theoretical study of the molecular properties and chemical reactivity of flavonoids related to their antioxidant activity (poster)
- The 21st Symposium of The Protein Society, Boston, U.S.A, July 19-23, 2007, "Computed Electrostatic Properties and Allosteric Enzymes" (Poster).
- 234<sup>th</sup> ACS National Meeting, Boston, 19-23 August 2007, A new look at allosteric enzymes with THEMATICS" (Poster)
- 234<sup>th</sup> ACS National Meeting, Boston, 19-23 August 2007, "A Classical/ Quantum Chemical Approach for Quantitative Structure Activity of Flavonoids (Poster)
- 8<sup>th</sup> Annual U.A.E University Research Conference, Al Ain, UAE, 21-24 April, 2007, The effect of mutation of High extreme Pka's amino acid residues on protein folding in Comparative Modeled Structures. (Oral).
- 8<sup>th</sup> Annual U.A.E University Research Conference, Al Ain, UAE, 21-24 April, 2007, Influence of the Preparation Method on the Physicochemical Properties of Fluconazole- $\beta$ -Cyclodextrin Complexes (Oral)
- 6<sup>th</sup> European Conference on Computational Chemistry, Tale, Slovakia, September 3-7 2006. "THEMATICS for Functional Ion Channel" (Poster).
- 2<sup>nd</sup> Asia Pacific Bioinformatics Conference, January 18, 2004, Dunedin, New Zealand. "THEMATICS is Effective for Homology Model Structures: A Simple Computational Predictor of Functional Information for Proteins"
- 7<sup>th</sup> Pacific Symposium on Bio-computing January 3, 2003, Hawaii, U.S.A. . "Electrostatic Calculations for Functional Genomics".
- 5<sup>th</sup> Annual Research Conference, U.A.E.U, April 25, 2004, Al-Ain, U.A.E. "Computational Methods for Functional Ion Channels".
- 4<sup>th</sup> Annual Research Conference, U.A.E.U, April 4, 2003, Al-Ain, U.A.E. "The Identification of Active Site Residues in Proteins Using the Microscopic Titration Curves (THEMATIC's)".
- 216<sup>th</sup> ACS national Meeting, August 1998 "Molecular modeling study of polyethylene glycol modification of horse cytochrome c".
- 216<sup>th</sup> ACS national Meeting, August 1998 "Model for the second hyperpolarizability in alternating polymers".
- 216<sup>th</sup> ACS national Meeting, August 1998 "Model for Stark effect spectral line shape for bridged mixed-valence complexes".
- ACS national Meeting, April 1995 "The Mechanism for large electrochromism in bis-phthalocyanine lutetium".
- 23<sup>rd</sup> American Chemical Society Northeast Regional Meeting, June 1993 " Electronic structure and properties of bis-phthalocyanine lutetium".

#### **Editorial Boards:**

- Member of the Editorial of Journal of Applied chemistry.



- Member of the Editorial of the Journal of Thermodynamics and Catalysis.

### **Membership in professional societies**

- Member of the American Chemical Society
- Member of the Protein Society, U.S.A.
- Member of the Division of Physical Chemistry.
- Theoretical Subdivision
- Member of Biophysical Chemistry Subdivision
- Member of the International Society of Biocomputing (ISBC)

### **Other Activities**

- Organizing Committee, “Third Conference of the Rectors of Arab-Russian Universities” University of Sharjah, May 31- June 1-2023.
- Member of the Organizing and Scientific committee, “1<sup>st</sup> International Conference on Applied Research in Humanities and Social Sciences: Multidisciplinary Global Practices”, 31 October to 2 November 2023 at the University of Sharjah, Sharjah, United Arab Emirates.
- Organizing Committee and Scientific Program Coordinator, “The Sharjah International Conference on Teaching and Learning in the post COVID19” University of Sharjah, March 16-18-2022.
- Organizing Committee and Scientific Program Coordinator, “The Second, third and 4<sup>th</sup> International Conference on Arab’s and Muslim History of Sciences”, University of Sharjah, 2014, 2017 and 2021.
- Member of the research group “Environmental and Chemical Biology”, RISE, University of Sharjah, 2018-present.
- Member of the research group “Organometalic”, RISE, University of Sharjah, 2018-2020.
- Judge for Think Sciences Competition, Emirates Foundation, 2012-2019.
- Organizing Committee, “Metal Material 2013 conference”, Sharjah, 2013
- Member of the Judging Committee, Think Science, Emirates Foundation, 2013.
- Member of the Judging Committee, Intel-Arab Science Competition, Intel. Inc., 2013
- Chaired a session in the 2<sup>nd</sup> Asia Pacific Bioinformatics Conference titled "Biopathways and
- Honorary member of the life maker Society, U.A.E University, U.A.E
- Certified CPR and Basic First Aid, National Safety Council, Cambridge, U.S.A. 2001
- Certification in Hazardous Waste Operation and Emergency Response, EBI Consultants, Cambridge, U.S.A.

### **Awards and Certificates:**

- Best performance Award for excellence in Service in the College of Sciences, University of Sharjah, 2020.
- Best performance Award for excellence in Service in the Department and nominated for the same award in College and University, United Arab Emirates University, 2007.
- Merit Award for exceptional service to the United Arab Emirates University, UAE University, 2006.
- Certificate of Appreciation for supporting extra-curricular activities at UAE University, Youth Care, UAE University, 2006.
- Certificate of Appreciation for efforts and contribution to College Committees, College of Science, UAE University, 2005-2006
- Certificate of Appreciation, Science Association, UAE University, 2006
- Certificate of Appreciation for efforts to establish the Chemistry Club, Department of Chemistry, UAE University, 2006.

### **General Academic Activities**

- **Courses taught:**
  - Research Methodology (MSc level)

- Advanced Physical Chemistry (MSc level)
  - Special Topics in Physical Chemistry (MSc level)
  - Computer Applications in Chemistry
  - General Chemistry (1) for Medical Sciences
  - General Chemistry (2) for Medical Sciences
  - General Chemistry (1) for Health Sciences
  - Chemistry in Our Life
  - General Chemistry I
  - General Chemistry and Engineering Applications I
  - General Chemistry II
  - Physical Chemistry I
  - Physical Chemistry and Engineering Application I
  - Physical Chemistry III
  - Quantum Chemistry
  - Molecular Spectroscopy
  - Integrated Studies in Chemistry
  - Research Project in Chemistry
  - Contemporary Scientific Affairs
  - Professional and Transferable Skills for Chemists
  - Organic Chemistry II
  - General Chemistry laboratories I and II
  - Physical Chemistry laboratories I and II
  - Inorganic Chemistry I and II
  - Inorganic Chemistry lab.
- **Courses developed:**
    - Molecular modeling course for bioinformatics/BSc level
    - Computational chemistry for the M.Sc. program in Bioinformatics
    - Advanced Physical Chemistry for the M.Sc. program in chemistry
    - Special topics in physical Chemistry for the M.Sc program in chemistry
    - Contemporary Scientific Issues (GEST 233), General Education course.
    - Professional and Transferable Skills for Chemists (CHEM 2111)
    - Integrated Studies in Chemistry (CHEM 409)
    - Spectroscopic Identification of Chemical Compounds
    - Physical Chemistry Lab II
    - Inorganic Chemistry Lab II
    - Computer Applications in Chemistry
- **Teaching/learning activities:**
    - Blackboard is used in all courses taught
    - Academic objective and educational outcomes were mapped with the Program and University goals for general chemistry I and II, Physical Chemistry I and III, and Molecular Spectroscopy courses.
- **Innovation in teaching:**
    - Use of blended learning in teaching of all courses
    - Funded Innovation in teaching project titled: "Implementing Data Acquisition Protocols in The Experimental Chemistry" was completed.
    - Development and Implementation of surveys for graduates and alumni of the Department of Chemistry to measure educational outcomes.
    - Using the VARK (Visual-Aural-Read/Write-Kinesthetic) analysis to develop the best methods of teaching our students.

- Development of Labtop project for the Physical Chemistry I course, 2006/2007.
- **Master Students Supervised**
  - Aisha Al Tunaiji (Currently enrolled, Co-Advisor)
  - Maryam Haitham Mouselly (Graduated May 2022)
  - Chala Nassab (Graduated, September 2021)
  - Salim Al Ameri, (Graduated in September 2003)
  - Deema Khalil Al Jayousi (Graduated in June 2008))
  - Mariam Humaid Al Shamsi (Graduated in June 2009)
- **Community Services:**
  - Representing the University of Sharjah in the Environmental and Protected Areas Authority in Sharjah, 2010-2012.
  - ***Presented the following Seminars***
    - Research Based Learning, UoS, October 2019.
    - Quality Structure activity relationships study for selected metal oxide/ mixed metal oxide catalysts, February 24, 2014, UoS
    - QSAR study of the antagonistic effects of flavoniods, May 12, 2012., UoS.
    - THEMATICS: Multi-Functional Tool for Protein Analysis, January 8<sup>th</sup>, 2010, UoS.
    - "Identification of Probable Pegylation Sites for Horse Cytochrome c Using a Computational Approach", January 2002
    - "Usage of Computational methods to Collect and Analyze Newly Discovered Proteins and Enzymes", March, 2002.
    - "Using Computers in teaching high School Chemistry", March 2003.
    - "Academic Assessment Process: From tools to Analysis", December 2003.
    - "Introduction to Tools Used in Bioinformatics and Bio-computing Research", March, 2004.
    - "Computational Methods to Predict Active Site in Orthologous and Homologous Model Structures", April 2004.
  - ***Contributions to Workshops:***
    - Simulation Workshop, April 25, 2022, College of Sciences and College of Health Sciences, University of Sharjah, UAE.
    - Computer Application and its Role in the professional skills for chemists and chemical educators, May 5<sup>th</sup>, 2012, Ministry of education-Sharjah division UAE
    - Chemistry and Computer Applications for educators, May 5<sup>th</sup>, 2010, Ministry of Education-Sharjah division UAE.
    - Hands on training on using Bomb Calorimeter for Chemistry staff involved in teaching physical chemistry lab, 10<sup>th</sup> October, 2009
    - Using Data Acquisition protocols and sensor in experimental physical chemistry for staff involved in teaching chemistry labs, November 11<sup>th</sup>, 2009, UoS
    - Measurement of the magnetic susceptibility of transition metals compounds, November 28<sup>th</sup>, 2009.
    - Designed and implemented 22 new experiments in the physical and inorganic labs, September 2009-May 2010, UoS
    - Safety in Chemical Laboratories, October 2003.
    - Ministry of Education lead high school teachers' workshop, March 2002 and March 2003.
    - Academic Assessment Workshop (Department of Chemistry), December 2003.
    - The first Workshop in Medical Physics at UAE, (Department of Physics), April 2004.

- ***Committees Served on:***
  - Coordinator of the College council, College of Sciences, University of Sharjah, 2014-present
  - Coordinator of the Examination and Scheduling Committee, College of Sciences, University of Sharjah, 2014-present
  - Member of the Academic Promotion Committee, College of Sciences, University of Sharjah, 2014-present
  - Member of the Safety Committee, University level, University of Sharjah, 2015/present.
  - Coordinator of the annual report committee, College of Sciences, University of Sharjah (2010-2014).
  - Member of the ad hoc Strategic Planning Committee for the College of Sciences (2013-2014).
  - Member in the Seminar committee, College of Sciences, University of Sharjah (2010-2011).
  - Member in the ad hoc committee to compile the laboratory safety manual, Central Laboratory Unit, University of Sharjah (2010-2011).
  - Coordinator of the Laboratory and Chemical Safety Committee, Department of Chemistry, University of Sharjah (2010-2011).
  - Member of Curriculum and Accreditation Committee, Department of Chemistry, University of Sharjah (2010-present).
  - Member of Recruitment Committee, Department of Chemistry, University of Sharjah (2010-present).
  - Member of the Graduate Committee, College of Sciences, University of Sharjah (2019-2020).
  - Member of Research and Community Service Committee, Department of Chemistry, University of Sharjah (2010-2011).
  - Coordinator of the Information and Library Committee, Department of Chemistry, University of Sharjah (2010-2014)
  - Auditing Committee for the central storage facilities in the University (Coordinator, UAE University, 2004/2005)
  - Committee to develop a general education course titled “Current Scientific Affairs (Member, University, 2004/2005)
  - Educational Performance and Development Committee (Coordinator, Department of Chemistry, UAEU, 2003/2004, 2004/2005, 2005/2006 and 2006/2007
  - Educational Performance and Development Committee (Member, College of Sciences, UAE University, 2003/2004, 2004/2005, 2005/2006 and 2006/2007
  - Extra Curricular Activities Committee (Member, College of Sciences, UAE University, 2003/2004, 2004/2005, 2005/2006 and 2006/2007.
  - Member of the ad hoc committee to seek the Canadian Society of Chemistry Accreditation for the Department of Chemistry, U.A.E.U, 2007.
  - Students’ Activity Committee (Coordinator, Department of Chemistry, UAEU, 2004/2005 and 2005/2006
  - Ad hoc laboratory Safety Committee (Member, Department of Chemistry, UAEU, 2003/2004)
  - Special Committee to Assess Computational Facilities in the College of Science (Member, College of Sciences, UAEU, 2003/2004)
  - Academic Planning Committee (Member, Coordinator, Departmental, 2003/2004)
  - College of Science Curricular Development Committee (UAE University, 2002/2003)

- Advisory Committee to evaluate the academic plan for the Environmental and Civil Engineering Track (UAE University, 2002)
- Member of The Academic Planning Committee (member, Department of Chemistry, UAEU 2002/2003)
- Member of the Academic Performance and Improvement Committee (member, Department of Chemistry, UAEU, 2002/2003)
- Member of the Laboratory supervising Committee (member, Department of Chemistry, UAEU, 2002/2003)
- Member of the Examination Committee (member, Department of Chemistry, UAEU, 2002/2003)
- Laboratory Supervision Committee (member, Department of Chemistry, UAEU, 2002/2003)
- Member of The Learning and Internet Committee (member, Department of Chemistry, UAEU, 2002/2003)
- Member of The Annual Report Committee (member, Department of Chemistry, UAEU, 1 2001/2002)
- Educational Outcomes Committee (member, Department of Chemistry, UAEU, 2001/2002)
- Academic Planning Committee (member, Department of Chemistry, UAEU 2001/2002)