

CV

Full name

Hanan Gouda Abd Elwahab Ahmed Elhaes

Date of birth

23-2-1970, Elkalyoubia, Egypt.

Nationality

Egyptian

Marital Status

Married and has three daughters

Address

31 El Ansar Str.- EIDokky

Giza - Egypt.

Tel.: 00202-37627538

Mob.: 002-01011847432

e-mail

hanan.elhaes@women.asu.edu.eg

medahmed@yahoo.com

**Educational
Background:**

-B.Sc. in Physics, Faculty of Women for Arts, Science, and Education, Ain Shams University, **May 1992**

-M.Sc. in Experimental Physics, Faculty of Women for Arts, Science, and Education, Ain Shams University, **April 1998**

Entitled:

"Effect of spray parameters on some physical and spectral properties of Iron Oxide thin film "

-Ph.D. in Experimental Physics, Faculty of Natural Science, Information and Mathematics, RWTH-Aachen University, Germany.

Entitled:

"Magnon heat transport and magnon-hole scattering in one and two dimensions spin systems"

Position

May 1992 to April 1998, Demonstratorat Faculty of Women for Arts, Science, and Education, Ain Shams University

April 1998 to July 1999, Assistant Lecturer at Faculty of Women for Arts,





Science, and Education, Ain Shams University - Egypt

July 1999 to October 2004, granted a Scholarship for Ph.D. study in Germany.
December 2004 up till 27-3-2010, Lecturer at Faculty of Women for Arts,
Science, and Education, Ain Shams University.

17-10-2008 Assistant Professor, Faculty of Science for Girls-Jazan University.

17-4-2009 up till 25-6-2011, Head of Physics department, Faculty of Science
for Girls-Jazan University.

27-3-2010 up 29-9-2015, Associate professor at Faculty of Women for Arts,
Science, and Education, Ain Shams University.

29-9-2015 up till now, professor at Faculty of Women for Arts, Science, and
Education, Ain Shams University.

23-8-2016 up 23-8-2019, Head of Physics department, Faculty of Women for
Arts, Science, and Education, Ain Shams University.

16-17 January 2012 Egyptian-Italian Science Forum 2012, Rome, Italy.

28 January 2014 to 07 February 2014 Visiting Professor, CNR, Research Area
1, Rome, Italy

18 September 2016 to 30 September 2016 Visiting Professor, CNR, Research
Area 1, Rome, Italy.

31 January 2017 to 10 February 2017 Visiting Professor, CNR, Research
Area 1, Rome, Italy.

01 July 2018 to 30 July 2018 Visiting Professor, Department of Neutron
Activation Analysis and Applied Research, Division of Nuclear Physics, Frank
Laboratory of Neutron Physics, Joint Institute for Nuclear Research, Dubna,
Russia.

6/2020 till 9/2021 Director of E-Learning unit, Faculty of Women for Arts,
Science, and Education.

15/8/2023 head of Scientific Research Ethics Committee, Faculty of Women for
Arts, Science, and Education.

Papers: 137 international papers and 19 national papers: list attached.

H- index: 23

Total citation: 2,427



No. International talks and Conferences

1. P. Reutler, R. Kessler, J. Geckl, D. Bruns, R. Klingeler, **H. ElHaes**, B. Buechner and A. Revcolevschi, 2002 “Ladungsordnung in $(La_{1-y}Pry)_{7/8}Sr_{1/8}MnO_3$ Manganaten Deutsche Physikalische Gesellschaft e. V. (DPG)E-Verhandlungen 2002, Regensburg (11. - 15. März 2002).
2. C. Hess, U. Ammerahl, C. Baumann, D. Bruns, D. Cassel, L. Colonescu, O. Friedt, **H. ElHaes**, M. Hücker, B. Büchner, M. Braden, A. Revcolevschi, S-W. Cheong, F. Heidrich-Meisner and W. Brenig, 2002 “Thermal Transport in Transition Metal Oxides with Low-Dimensional Structures of Charge and Spin Ladungsordnung in $(La_{1-y}Pry)_{7/8}Sr_{1/8}MnO_3$ Manganaten, Deutsche Physikalische Gesellschaft e. V. (DPG), E-Verhandlungen 2002, Regensburg (11. - 15. März 2002).
3. **H. ElHaes**, C. Hess, B. Buechner, M. Huecker, U. Ammerahl and A. Revcolevschi, 2003 “Magnon-Hole Scattering in $Sr_{14-x}Ca_xCu_{24}O_{41}$ “Deutsche Physikalische Gesellschaft e. V. (DPG), E-Verhandlungen 2003, Dresden (24. - 28. März 2003).
4. P. Ribeiro, P. Reutler, C. Hess, **H. ELHaes**, B. Buechner, G. Roth, and S. Richter, 2003 “Niedrigdimensionale Kuprate: Kristallzüchtung und Wärmeleitfähigkeit „Deutsche Physikalische Gesellschaft e. V. (DPG), E-Verhandlungen 2003, Dresden (24. - 28. März 2003).
5. **H. ElHaes**, C. Hess, P. Ribeiro, B. Buechner, M. Huecker, U. Ammerahl, A. Revcolevschi, F. Heidrich-Meisner and W. Brenig 2004 “Magnon heat transport of 2-leg spin ladders: Scattering on holes and static defects” Deutsche Physikalische Gesellschaft e. V. (DPG), E-Verhandlungen 2004, Regensburg (08.-12.03.2004).
6. C. Hess, **H. ElHaes**, P. Ribeiro, B. Buechner, F. Heidrich-Meisner, W. Brenig, M. Huecker, U. Ammerahl and A. Revcolevschi 2004, "Heat Transport in Low Dimensional Spin Systems ” Deutsche Physikalische Gesellschaft e. V. (DPG), E-Verhandlungen 2004, Regensburg (08.-12.03.2004).
7. G. M. El Komy, **H. Elhaes**, M. Ibrahim, J. Liu, J. Huang, M. Selim, “Sensor Technology and Nano Devices of Tin Oxide Films Prepared by Sol Gel”, The International Conference For Nanotechnology Industries The Leading Technology of 21st Century” Riyadh, Saudi Arabia, 5-7 April, 2009.
8. **Hanan Elhaes**, Abdullah Al-Hossain, Afaf Babaier and Medhat Ibrahim, “Spectroscopic Analysis of Fullerene Alkali Dimer, The 2nd International Conference on Advanced Materials and their Applications and its workshop on “New Trends in Nano-science and laser Physics” Cairo, Egypt, 6-8 April 2010
9. **Hanan Elhaes**, Hanan Moawad, and Medhat Ibrahim “Computational Analyses of the Chromium Interaction with Protein “ 1st International Conference on Electrical and Computer Systems Engineering (ECSE 2010), Cairo, Egypt, **November 1-3, 2010**



10. Osama Osman, Medhat Ibrahim, and **Hanan Elhaes** "Interaction of Nano Structure Material with Heme Molecule: Modelling Approach "1st International Conference on Electrical and Computer Systems Engineering (ECSE 2010), Cairo, Egypt, November 1-3, 2010.
11. Medhat Ibrahim and **Hanan Elhaes**, "Exploring Materials Using Molecular Modeling", Egyptian-Italian Science Forum 2012, Rome, Italy, January 16-17, 2012 (Talk).
12. Abd el baset H. Makky, **Hanan Elhaes**, Mohamed M. El-Oker and Medhat A. Ibrahim "Synthesis, Electronic Properties of some Fullerene Based Systems" International Conference on Material Science and Applications (ICMSA 2012), Taif University, Saudi Arabia, 2012.
13. **Hanan Elhaes**, Medhat Ibrahim, Gusabina Cabriouty "Effect of Salinity on the Molecular Structure of Soil of Archaeological Sites: Spectroscopic and Modelling Approach ", the 5th National Conference on Optical Spectroscopy, Laser and their Applications 24 - 27 March 2014. NRC, Cairo, Egypt.
14. Mohamed Morsy, **Hanan Elhaes**, Medhat Ibrahim, " High Purity Multi-Wall Carbon Nano Tube for Environmental Applications", 2nd International Conference on "Biotechnology and Environmental Safety" May 6-8, 2014.
15. Medhat Ibrahim, Hanan Ibrahim and **Hanan Elhaes**, " Modeling and Spectroscopic Analyses of Water Hyacinth", The 23rd International Conference on High Resolution Molecular Spectroscopy, Bolonga, Itlay September, 2-6, 2014.
16. Medhat Ibrahim, and **Hanan Elhaes** "Preservation of Stone-Based Monuments: Molecular Modeling Approach", the 3rd International Conference on Advanced Materials and Their Applications, National Research Centre, Egypt, January 11-13, 2015.
17. Osama Osman and **Hanan Elhaes** " Interaction of Nano Metal Oxide with Heme Molecule ", the 6th International Conference on Optical Spectroscopy, Laser and their Applications 7 -9 April 2015. NRC, Cairo, Egypt.
18. Medhat Ibrahim , Osama Osman, Abdel Aziz Mahmoud and **Hanan Elhaes**, "Towered the Nature: Nano Modified Microsphere For Remediation of Heavy Metals", the 32nd Eg-MRS International Conference, 6th -9th Jan 2016, Aswan, Egypt
19. Dina Ezzat, Abdel Aziz Mahmoud, Mahmoud El-Nahhas and **Hanan Elhaes** " AC Conductivity and Dielectric Properties of ZnO/Cellulose Acetate Blend", **the 7th International Conference on Optical Spectroscopy, Laser and their Applications 18 -20 October 2016. NRC, Cairo, Egypt.**
20. Aly Okasha, Fathia Gomaa, **Hanan Elhaes**, Mohamed Morsy , Sherif El-Khodary, Ahmed Fakhry, Medhat Ibrahim, **2017** "Spectroscopic analyses of the photocatalytic behavior of nano titanium dioxide", The 3rd International Conference on "Biotechnology and Environmental Safety" , NRC, Cairo, 14-16 March, 2017.



21. **Hanan Elhaes** and Medhat Ibrahim 2017 "Spectroscopic Analyses for the Effect of Salinity on Soil", The 3rd International Conference on "Biotechnology and Environmental Safety" , NRC, Cairo, 14-16 March, 2017.
22. Medhat Ibrahim and **Hanan Elhaes** 2017 " Theory and Molecular Modeling: Applied to Nanoscience", **The 9th International Conference on Nano Technology in Construction (NTC 2016) 17-21 March 2017, Sharm El-Sheikh-Egypt.**
23. Medhat Ibrahim and **Hanan Elhaes** 2017: Molecular Modeling As a Tool for Analyses and Assignments of Polymers", 13th Arab International Conference on Polymer Science and Technology 22-25 October 2017, Sharm El-Sheikh-Egypt.
24. **Hanan Elhaes**, Ahmed Refaat and Medhat A. Ibrahim " Molecular Modeling Analyses for Metal Oxide/Graphene" Egypt-Japan University of Science and Technology, New Borg El-Arab, Alexandria, Egypt, 11-13 March 2018
25. **H. Elhaes1**, A. Refaat and M. A. Ibrahim, Effect of CaO, MgO and SrO on the physical properties of graphene. 10th International Conference on NANO-TECHNOLOGY IN CONSTRUCTION (NTC 2018) 13-17 April 2018, Hurgada, Egypt
26. **Hanan Elhaes**, Modeling the Effect of Metal Substitution on the Electronic Properties of Fullerene and Fulleropyrrolidine, The First International Conference on Molecular Modeling and Spectroscopy, National Research Centre, Cairo, Egypt, 19-22 February 2019.
27. Rania Badry, **Hanan Elhaes** and Medhat Ibrahim, Polyaniline Substituted with Alkali and Alkaline Earth Elements: Molecular Modeling Approach 11th International Conference on NANO-TECHNOLOGY IN CONSTRUCTION (GREEN AND SUSTAINABLE CONSTRUCTION) (NTC 2019), 22-26 March 2019, Sharm El-Sheikh-Egypt
28. The second hybrid international conference on molecular modeling and spectroscopy, September 23-24, 2021
29. The third hybrid international conference on molecular modeling and spectroscopy, September 23-24, 2021
30. المؤتمر الاول للمرأة في العلوم بأكاديمية البحث العلمى و التكنولوجيا 8-مارس 2020 و التى نظمتها اللجنة الوطنية للمرأة في العلوم بالاكاديميه تحت عنوان: دور المرأة العلمية في تحقيق اهداف التنمية المستدامة- مصر 2030 (محور الصحة)
31. المؤتمر الثانى للمرأة في العلوم بأكاديمية البحث العلمى و التكنولوجيا 8-سبتمبر 2021 و التى نظمتها اللجنة الوطنية للمرأة في العلوم بالاكاديميه تحت عنوان: دور المرأة العلمية في تحقيق اهداف التنمية المستدامة- مصر 2030 (محور الغزاء) القضاء التام على الجوع
32. المؤتمر الدولى الاول للتعليم و الطلاب الذى عقد بكلية البنات للاداب و العلوم و التربية - جامعة عين شمس بمحاضرة تحت عنوان " تحديات جامعات الجيل الرابع فى ظل جائحة كورونا: النموذج المصرى " الثلاثاء 27 يوليو 2021
33. The Fourth Hybrid International Conference on Molecular Modeling and Spectroscopy, December 23-24, 2022



**34. The Fifth Hybrid International Conference on Molecular Modeling and Spectroscopy ,
September 17-19, 2023**

Attend the following conferences and seminars

1. Conference: Fourth National Conference, Science and environment, Al-Azhar University., Cairo, 17 – 19 Sept., 1999
 2. Conference: First International conference on Advanced Materials and Their applications, 12-14 December 2005. National Research Center, Cairo, Egypt
 3. Norbert Kreidl Memorial international course and Conference on Science and Technology of Advanced Glasses, Building Bridges Between Glass Science and Technology and Between Cultures, AUC, Cairo, Egypt 2006
 4. Seminar: Application of Spectroscopy in Medicine, Industry and Environment, (Spectroscopy Department Annual Seminar- 2006
 5. Workshop: Biological and Industrial Applications of Gas Sensors, NRC, Cairo 17-01-2008, Egypt-China agreement
 6. Seminar: Physics in Our Life, NRC, Cairo 30-04-2012
 7. Workshop: Application of Molecular Modeling, NRC, June 24-25, 2013
 8. Seminar: One Day Seminar: Raman Technologies: An Overview, NRC, September 25, 2013
 9. Workshop: Technologies for the Egyptian Cultural Heritage (TECH) Workshop in the framework of the Agreement of ASRT, Egypt & CNR, Italy. CNR, Rome, Italy, February 0, 2014
 10. Conference: 5th National Conference on Optical Spectroscopy, Laser and their Applications 24 - 27 March 2014. NRC, Cairo, Egypt
 11. Conference: The 2nd International Conference on "Biotechnology and Environmental Safety" NRC, May 6-8, 2014
 12. Seminar: Modern Applications in Physics, National Research Center, Cairo, Egypt, April 9, 2014
 13. Workshop: Molecular Modeling: Theory and Applications, NRC, June 17, 2014
 14. Conference: The 23rd International Conference on High Resolution Molecular Spectroscopy, Bologna, Italy, September 2-6, 2014
 15. Seminar: Solar Energy: Materials, Applications and Challenges, NRC, Cairo, Egypt, October 14, 2014
- Seminars, Workshops and Conferences (as organizer)**
16. Workshop: Coordinator of the First Workshop: Applications of Molecular Modeling, Physics Department, Faculty of Women for Arts, Science and Education, Ain Shams University, Cairo, Egypt, April 25-26, 2017
 17. Workshop: Coordinator of the Second Workshop: Estimation of HOMO/UMO Band Gap Energy, , Physics Department, Faculty of Women for Arts, Science and Education, Ain Shams University, Cairo, Egypt, September 19-20, 2018
 18. Workshop: Coordinator of the Workshop "Modeling and Simulation at Molecular Modeling Clube, El-Manshya, Qalyobia, 02-05 October 2018
 19. Winter School: Coordinator of the First Spectroscopy Winter School SWS-1, Physics Department, Faculty of Women for Arts, Science and Education, Ain Shams University, Cairo, Egypt, 12-16 December 2018
 20. Conference: Coordinator of the First International Conference on Molecular Modeling and Spectroscopy, National Research Centre, Cairo, Egypt, 19-22 February 2019
 21. Winter School: Coordinator, The Second Spectroscopy Winter School SWS-2, Ismaillia, Egypt, 25-31 January 2020
 22. Online Conference: Coordinator The second international conference on molecular modeling and



- spectroscopy, September 23-24, 2020
23. Winter School: The Third Spectroscopy Winter School SWS-3, Cairo, Egypt, January 2021
 24. Winter School: Coordinator The fourth Spectroscopy Winter School SWS-4, Cairo, Egypt, February 2022
 25. Online Conference: Coordinator, The third international conference on molecular modeling and spectroscopy, September 23-24, 2021
 26. المشاركة في تنظيم مؤتمر اللجنة الوطنية للمرأة في العلوم بأكاديمية البحث العلمي و التكنولوجيا 8- مارس 2020 و التي نظمتها اللجنة الوطنية للمرأة في العلوم بالاكاديميه تحت عنوان: دور المرأة العلمية في تحقيق اهداف التنمية المستدامة- مصر 2030 (محور الصحة)
 27. المشاركة في تنظيم ورشة العمل باكاديمية البحث العلمي و التكنولوجيا يوم ٢٨ ديسمبر ٢٠٢٠ و التي نظمتها اللجنة الوطنية للمرأة في العلوم بالاكاديميه تحت عنوان: "دور المرأة العلمية في مواجهة جائحة كورونا وتدايها"
 28. المشاركة في تنظيم مؤتمر اللجنة الوطنية الثاني للمرأة في العلوم بأكاديمية البحث العلمي و التكنولوجيا 8- سبتمبر 2021 و التي نظمتها اللجنة الوطنية للمرأة في العلوم بالاكاديميه تحت عنوان: دور المرأة العلمية في تحقيق اهداف التنمية المستدامة- مصر 2030 (محور الغزاء) القضاء التام على الجوع
 29. المشاركة في المؤتمر الدولي الاول للتعليم و الطلاب الذي عقد بكلية البنات للاداب و العلوم و التربية - جامعة عين شمس بمحاضرة تحت عنوان " تحديات جامعات الجيل الرابع في ظل جائحة كورونا: النموذج المصري" الثلاثاء 27 يوليو 2021
 30. المشاركة في تنظيم ورشة عمل بمركز النانوتكنولوجي بالجامعة البريطانية في مصر ضمن أنشطة النانو كلب (Nano Club)- 4 اغسطس 2021
 31. المشاركة في تنظيم تدريب لطلاب الجامعات المصرية بمركز النانوتكنولوجي بالجامعة البريطانية في مصر ضمن أنشطة النانو كلب (Nano Club)- من 8 – 30 اغسطس 2021
 32. Hybrid Conference: Co-Chairperson, The Fourth Hybrid International Conference on Molecular Modeling and Spectroscopy, December 23-24, 2022
 33. Hybrid Conference: Chairperson, The Fifth Hybrid International Conference on Molecular Modeling and Spectroscopy, September 17-19, 2023
 34. Workshop coordinator: Eco-Friendly Cost-Effective Microsphere for Multiple Applications, 22 April 2024, NRC, Cairo, Egypt
 35. Workshop coordinator: Multiple Applications for 3D Printers, 28 October 2024, NRC, Cairo, Egypt

Supervision

Finished Thesis

1. Abdel Baset Hofny, "Electronic Properties of some Fullerene Based Systems", Physics Department, Al-Azhar University. PhD.
2. Mohamed Attallah, "Optical and Physical behavior of glasses doped with some transition metal elements", Physics Department, Al-Azhar University. PhD.
3. Dina Ezzat, "Some Physical and Spectral Analyses of Cellulose Derivatives", Physics Department, Ain Shams University. McS.
4. Rania Badry, Preparation and Characterization of Some Polymer Blend, McS.
5. Dina Ezzat, Physical Characteristic of Some Biopolymers Doped with Different Nano-Metal Oxides, PhD
6. Rania Badry, Spectroscopic Study for Nano-Composites of Natural Polymer and Nano Metal Oxides, PhD



Running Thesis

7. Fatma Gamal, Modified Metal Oxides/Polymers Nano-Composites as Anticorrosive Layer, MSc.
8. Esraa Soliman, Studying the Electronic Properties of Carbon Based Materials for Energy Storage Applications, , MSc.
9. Dina Shehata, Preparation and Physical Study for Chitosan/Hydroxyapatite/Graphene Oxide Nanocomposite, MSc.
10. Fatma Abd Elwahab, Studying the Structural, Electrical and Optical Properties of Two-Dimensional Materials for Solar Cell Applications, PhD
11. Naglaa Mohamed Sadek, Synthesis and Characterization of Polymer Nanocomposite Membranes for Ultraviolet Blocking Applications, PhD

Prizes and Awards

1. **Prof. Dr. Mohamed Ameen Lotfy Prize for Physical Sciences, 2011.**
2. **Ain Shams Appreciation award, 2022**

Projects

1. Eco-Friendly Cost-Effective Microsphere for Multiple Applications, (PI): STDF 47336.
Duration: 22-05-2022 to 30-11- 2024.
2. Molecular Modeling and Experimental Neutron Scattering Studies of Interactions of the Condensed Matter and Biological (Lipid Membranes) Systems. ASRT- JINR bilateral project
Duration: 01-07-2020 to 30-07- 2022.
3. Molecular Modeling Analyses of the Effect of Nano Metal Oxides on Biological Molecules. (Member): ASRT- JINR bilateral project.
Duration: 01-12-2018 to 30-11-2019
4. Spectroscopic analyses for natural microsphere for maximizing its application in the remediation of inorganic pollutants.: NRC-CNR agreement: ID: IT1022
Duration: 20-03-2016 to 19-03-2018.
5. Cost Effective Design and Implementation of Microsphere production for Wastewater Treatment (Member I): ASRT-1217 ASRT Initiative
Duration: 24-12-2016 to 23-12-2018.
6. Molecular Modeling Applications of Some Bio-Polymers - PI: STDF 14990
Duration: 8-12-2015 to 7-12-2017.



7. Spectroscopic analyses of some fullerene-based systems containing dithiocarbamate moieties (Co-PI): STDF 4347
Duration: 17-06-2012 to 16-12-2015.
8. On the Structural Analyses of Multifunctional Natural Microsphere.
(Co-PI): STDF 4371
Duration: 18-3-2014 to 17-3-2016.
9. Photogrammetry: Technology for the Egyptian Cultural Heritage (TECH)
ASRT-NCR Agreement.
Duration: 24-12-2013 to 23-12-2015.
10. Effect of Salinity on the Molecular Structure of Jazan Soil. (Member): Jazan University, KSA., 029/ 1434 H
Duration: 02-04-2012 to 01-04-2013.
11. Reflection and Refraction of Waves in Nano-Smart Materials (Anisotropic Thermo-piezoelectric Materials). (Member): Jazan University, KSA., 020/ 1431 H
Duration: 02-04-2012 to 01-04-2013
12. Development of Natural Blends for Removal of Organic Pollutants. (Member): Taif University, KSA. 1-143-1975.
Duration: 23-01-2012 to 22-01-2013.
13. Member in the project of scientific cooperation between Egypt and China entitled: Preparation of gas sensors based on Carbon Nanotube / thin film of semiconductor oxide and its application.
Duration: 01-01-2007 to 30-12-2010.
14. Molecular Modeling Approach for the Design and Evaluation of Hepatitis C Virus Inhibitors. Funded by Cairo University.
Duration: 01-07-2011 to 30-06-2012.

Society

1. Member of the Egyptian Materials Research Society.
2. Member of the Egyptian Crystallography Society



3. Member of the German Society of Physics (DPG).
4. Member of the Egyptian Syndicate of Scientific Missions.
5. National Committee for Women in Science 2018 to 2021.
6. International Society of Muslim Women in Science, USA
7. National Committee for Crystallography 2022



List of Publications

Full name Hanan Gouda Abd Elwahab Ahmed Elhaes

List of Publications

2024

1. Sabry, N.M., Badry, R., Abdel-Gawad, F.K., **Elhaes, H.**, Ibrahim, M.A. Electronic structure, global reactivity descriptors and nonlinear optical properties of glycine interacted with ZnO, MgO and CaO for bacterial detection, Scientific Reports, 2024, 14(1), 22801
2. Khaled S. Amin, Mohamed M. Yassin, Yahia M. Abdallah, Yusuf M. Alsayyad, **Hanan Elhaes** & Medhat A. Ibrahim. Application of PLA/GO/ZnO and PLA/GO/Cu₂O as sensor. Scientific Reports, 2024, 14(1), 22022
3. Nayera M. El-Sayed, **Hanan Elhaes**, Asmaa Ibrahim & Medhat A. Ibrahim. Investigating the electronic properties of edge glycine/biopolymer/graphene quantum dots. Scientific Reports volume 14, Article number: 21973 (2024)
4. Ahmed Refaat, Medhat A. Ibrahim, Dina Shehata, **Hanan Elhaes**, Asmaa Ibrahim, Kahramon Mamatkulov and Grigory Arzumanyan, "Design, characterization and implementation of cost-effective sodium alginate/water hyacinth microspheres for remediation of lead and cadmium from wastewater", International Journal of Biological Macromolecules. (2024), 133765
5. **Hanan Elhaes**, Asmaa Ibrahim, Osama Osman and Medhat A. Ibrahim "Molecular Modeling Analysis for Functionalized Graphene/Sodium Alginate Composite", Sci. Rep. 14 (2024) 14825.
6. Islam Gomaa , Nasser Mohammed Hosny, **Hanan Elhaes**, Hend A. Ezzat, Maryam G. Elmahgary and Medhat A. Ibrahim, "Two-Dimensional MXene as a Promising Adsorbent for Trihalomethanes Removal: A Density-Functional Theory Study", Nanomaterials 2024, 14, 454.
7. Gomaa Abdel-Maksoud, Ola A. Mohamed, Wael S. Mohamed, Khaled Elnagar, Aya Abdallah, Rana Youssef, Doha Elsayed, Nesreen Labib, Ahmed M. Bayoumy, **Hanan Elhaes** and Medhat Ibrahim," Physical prospective of polyamide 6 for the consolidation of fragile vegetable tanned Leather artifacts", Journal of Cultural Heritage. 67 (2024) 32–41
8. Salma Sherif, Ahmed Sameh, Sohaila Mohammed Salah, Amina Omar, **Hanan Elhaes**, Asmaa Ibrahim, Ahmed Refaat and Medhat A. Ibrahim," DFT and QSAR Study of Catechol-O-Methyltransferase (COMT) as Inhibitors for Parkinson's Disease Treatment", Opt Quant Electron. 56 (2024) 633.
9. **Hanan Elhaes**, Hend A. Ezzat, Asmaa Ibrahim, Mona Samir, Ahmed Refaat and Medhat A. Ibrahim,"Spectroscopic, Hartree-Fock and DFT study of the Molecular Structure and Electronic Properties of Functionalized Chitosan and Chitosan-Graphene Oxide for Electronic Applications", Opt Quant Electron. 56, (2024) 458.
10. Kh.T. Kholmurodov, I.O. Simonenko, P.P. Gladyshev, M.Y. Yablokov, **H. Elhaes**, A. Ibrahim and M. Ibrahim, "The Experimental and MD Studies of the Sorption Processes of Organic Molecules on the SiO₂ Surface", Opt Quant Electron. 56 (2024) 360
11. Rania Badry, Nadra Nada, Mahmoud M. El-Nahass, **Hanan Elhaes** and Medhat A. Ibrahim,"Enhanced Sensing Performance of Carboxymethyl Cellulose Sodium to Hydrogen Sulphide Gas and Methylene Blue Dye by Constructing CuO@ZnO Core/Shell Heterostructure: A DFT/TD-DFT Study", Opt Quant Electron. 56 (2024) 326.



12. Ezzat, D., Youssif, M., **Elhaes, H.**, El-Nahass, M., “XRD and UV–Vis studies of cellulose acetate film blended with different concentrations of nano-metal oxide” *Optical and Quantum Electronics*, 56(5), (2024) 839

2023

13. Refaat, Ahmed; **Elhaes, Hanan**; Ibrahim, Medhat, Effect of alkali metals on physical and spectroscopic properties of cellulose. *Scientific Reports* Volume 13, Issue 1 December 2023 Article number 21649
14. **Hanan Elhaes**, Ahmed I. Abdel-Salam, Islam Gomaa, Asmaa Ibrahim, Ibrahim S. Yahia, Heba Y. Zahran, Hend A. Ezzat, Mohamed Zahran, Mohamed Sh. Abdel-wahab, Ahmed Refaat and Medhat A. Ibrahim,” Facile synthesis, structural, morphological and electronic investigation of Mn₂O₃ nano-rice shape and Mn₂O₃-rGO hybrid nanocomposite”, *Opt Quant Electron.* (2023) 55:947.
15. Taha Tiama, **Hanan Elhaes**, Medhat A. Ibrahim, Ahmed Refaat, Mohamed El-Mansy and Noha Sabry, “Molecular and biological activities of metal oxide-modified bioactive glass”, *Scientific Reports*. 13, (2023) Article number: 10637
16. Hend A. Ezzat, Maroof A. Hegazy, Rasha Ghoneim, Heba Y. Zahran, Ibrahim S. Yahia, **Hanan Elhaes**, Ahmed Refaat and Medhat A. Ibrahim, “DFT and QSAR Studies of PTFE/ZnO/SiO₂ Nanocomposite”, *Scientific Reports*. 13, (2023) 9696
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