Ain Shams University

Faculty of Women for Arts, Science and Education

Physics Department

جامعة عين شمس

كلية البنات للاداب والعلوم و التربيه

قسم الفيزياء

CV

Full name	**Rania Badry Amin El Sayed Hassan**
Date of birth	20-08-1994, Sohag, Egypt.
Nationality	Egyptian
Marital Status	Married and has one daughter
Address	10 El Geushy Str.- El Eshreen Str.- Faysal Giza - Egypt. Mob.: 002-01115297491 002- 01115150358
	E-mail rania.badri@women.asu.edu.eg raniabadry806@gmail.com

Milestones

Previous projects:	1
Supervised thesis	1
Referee at	5 international journals
The millstone of research activates could be indicated by Scopus data as:	Scopus ID: 57204314805 Orcid ID: https://orcid.org/0000-0003-1506-2629
Scopus H-index	11
Scopus total Citations	299
Scopus total documents:	25
International Publications:	27
In press:	4
National Publications:	1

Educational Background:

-B.Sc. in Physics, Faculty of Women for Arts, Science, and Education, Ain Shams University, **May 2016**

-M.Sc. in Experimental Physics (Spectroscopy), Faculty of Women for Arts, Science, and Education, Ain Shams University, **December 2019**

Entitled:

"Preparation and Characterization of Some Polymer Blend"

-Ph.D. in Experimental Physics (Spectroscopy), Faculty of Women for Arts, Science, and Education, Ain Shams University, **June 2023**

Entitled:

"Spectroscopic Study for Nano-Composites of Natural Polymer and Nano Metal Oxides"

Position

May 2018 to January 2020, Demonstrator at Physics Department - Faculty of Women for Arts, Science, and Education, Ain Shams University– Egypt.

January 2020 to September 2023, Assistant Lecturer at Physics Department - Faculty of Women for Arts, Science, and Education, Ain Shams University – Egypt.

October 2023- up tell now, Lecturer at Physics Department - Faculty of Women for Arts, Science, and Education, Ain Shams University – Egypt.

Projects

- Member in "Molecular Modeling and Experimental Neutron Scattering Studies of Interactions of the Condensed Matter and Biological (Lipid Membranes) Systems" project. ASRT- JINR bilateral project **Duration**: 01-07-2020 to 30-07- 2022.

Reviewer

Reviewer at the following journals:

1. ***Materials Today Communication Journal***
2. ***Inorganic and Nano-Metal Chemistry Journal***
3. ***Optical and Quantum Electronics Journal***
4. ***Journal of Materials Science Research and Reviews***
5. ***Egyptian Journal of Chemistry***

List of Publications

Full name Rania Badry Amin El Sayed Hassan

2024

1. A. Fahmy, **R. Badry**, R. M. Khafagy, and M. A. Ibrahim. Effect of glycerin on the physical properties of polyvinyl alcohol/sodium alginate blend. Scientific Reports, 14(1), 24979, (2024).

2. N. M. Sabry, **R. Badry**, F. K. Abdel-Gawad, H. Elhaes and M. A. Ibrahim. Electronic structure, global reactivity descriptors and nonlinear optical properties of glycine interacted with ZnO, MgO and CaO for bacterial detection. Scientific Reports, 14(1), 22801, (2024).

3. **R. Badry**, M. M. El- Nahass, N. Nada, H. Elhaes and M. 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. Optical and Quantum Electronics, 56(3), 326, (2024).

2023

4. **R. Badry**, M. M. El- Nahass, N. Nada, H. Elhaes and M. A. Ibrahim, UV filters and high refractive index materials based on carboxymethyl cellulose sodium and CuO@ ZnO core/shell nanoparticles. Scientific Reports, 13(1), 21159, (2023).

5. **R. Badry**, M. A. Hegazy, I. S. Yahia, H. Elhaes, H.Y. Zahran and M. A. Ibrahim, Effect of Zinc Oxide on the Optical Properties of Polyvinyl Alcohol/Graphene Oxide Nanocomposite. Biointerface Res. Appl. Chem, 13(39), (2023).

6. **R. Badry**, A. Ibrahim, F. Gamal, M. A. Hegazy, I. S. Yahia, H. Elhaes, H.Y. Zahran and M. A. Ibrahim, Design and implementation of low-cost gas sensor based on functionalized graphene quantum dot/Polyvinyl alcohol polymeric nanocomposites. Optical and Quantum Electronics, 55(3), 247, (2023).

7. **R. Badry**, M. M. El- Nahass, N. Nada, H. Elhaes and M. A. Ibrahim, Structural and UV-blocking properties of carboxymethyl cellulose sodium/CuO nanocomposite films. Scientific Reports, 13(1), 1123, (2023).

2022

8. **R. Badry**, M. A. Hegazy, I. S. Yahia, H. Elhaes, H.Y. Zahran, A. I. Abdel-Salam, H. Matar and M. A. Ibrahim, Enhancing the Optical Properties of Starch/ZnO Nanocomposites using Graphene Oxide. Egyptian Journal of Chemistry, Egyptian Journal of Chemistry, *65*(7), 335-342 (2022).

9. **R. Badry**, H. Elhaes, N. Nada, M. M. El- Nahass and M. A. Ibrahim, The Detection of NH_3, H_2S and HBr Gases by Carboxymethyl Cellulose Sodium / ZnO Nanocomposites: A Theoretical Study. Egyptian Journal of Chemistry, *65*(7), 281-292 (2022).

10. A. Omar, **R. Badry**, M. A. Hegazy, I. S. Yahia, H. Elhaes, H.Y. Zahran , M. A. Ibrahim and A. Refaat, Enhancing the optical properties of chitosan, carboxymethyl cellulose, sodium alginate modified with nano metal oxide and graphene oxide. Optical and Quantum Electronics, 54(12), 806, (2022).

2021

11. **R. Badry**, S. El-Khodary, H. Elhaes, N. Nada, and M. A. Ibrahim, Optical, conductivity and dielectric properties of plasticized solid polymer electrolytes based on blends of sodium carboxymethyl cellulose and polyethylene oxide. Optical and Quantum Electronics, 53(1): 1-15 (2021).

12. **R. Badry**, H. Ezzat, A., S. El-Khodary, M. Morsy, H. Elhaes, N. Nada, and M. A. Ibrahim,

Spectroscopic and thermal analyses for the effect of acetic acid on the plasticized sodium carboxymethyl cellulose. Journal of Molecular Structure, 1224: 129013(2021).

13. **R. Badry**, A. Fahmy, A. Ibrahim, H. Elhaes, and M. A. Ibrahim Application of polyvinyl alcohol/polypropylene/zinc oxide nanocomposites as sensor: modeling approach. Optical and Quantum Electronics, 53, 1-12, (2021).

14. **R. Badry**, H. Elhaes, N. Nada, and M. A. Ibrahim, Study of the electronic properties of solid polymer electrolytes based on blends of CMC, PEO, and acetic acid. Biointerface Res. Appl. Chem., 11, 11009-11002, (2021).

2020

15. **R. Badry**, A. Ibrahim, F. Gamal, S.A. Ibrahim, H. Ezzat, H. Elhaes, and M. A. Ibrahim, Modeling the Effect of Zinc Oxide on the Electronic Properties of Polyvinyl Alcohol. *Egyptian Journal of Chemistry*, 63: 4789-4796 (2020).

16. **R. Badry**, H. Elhaes, N. Nada, and M. A. Ibrahim, Study of the Electronic Properties of Solid Polymer Electrolytes Based on Blends of CMC, PEO, and Acetic Acid. *Biointerface Research in Applied Chemistry*, 11: 11009-11022 (2020).

17. **R. Badry**, A. Ibrahim, F. Gamal, D. Shehata, H. Ezzat, H. Elhaes, and M. A. Ibrahim, Electronic Properties of Polyvinyl Alcohol/TiO2/SiO2 Nanocomposites. *Biointerface Research in Applied Chemistry*, 10: 6427-6435 (2020).

18. **R. Badry**, S. H. Radwan, D. Ezzat, H. Ezzat, H. Elhaes, and M. A. Ibrahim, Study of the Electronic Properties of Graphene Oxide/(PANi/Teflon). *Biointerface Research in Applied Chemistry*, 10: 6926-6935 (2020).

2019

19. **R. Badry,** S. El-Khodary, H. Elhaes, N. Nada, and M. A. Ibrahim, On the molecular modeling analyses of sodium carboxymethyl cellulose treated with acetic acid, *Nano Bio Letters*, 2019, 8(2). pp. 553-557.

20. **R. Badry,** S. El-Khodary, H. Elhaes, N. Nada, and M. A. Ibrahim, The Influence of Moisture on the Electronic Properties of Monomer, Dimer, Trimer and Emeraldine Base Sodium Carboxymethyl Cellulose. *Egyptian Journal of Chemistry*, *62*(The First International Conference on Molecular Modeling and Spectroscopy 19-22 February 2019).

21. H. Ezzat, **R. Badry,** I. S. Yahia, H. Y. Zahran, H. Elhaes,, and M. A. Ibrahim, Mapping the molecular electrostatic potential of fullerene. *Egyptian Journal of Chemistry*, *62*(The First International Conference on Molecular Modeling and Spectroscopy 19-22 February 2019).

22. A.M. Bayoumy, **R. Badry**, H.A. Gaber, H.Ezzat, H. Elhaes, H.Y. Zahran, and M. A. Ibrahim, Molecular modeling analyses for the effect of solvents on amino acids *Biointerface Research in Applied Chemistry*, 9: 4379-4383 (2019).

2018

23. H. Ezzat, I. S. Yahia, H. Y. Zahran, S. AlFaify, **R. Badry**, H. Elhaes, and M. A. Ibrahim "Properties of Fullerene for the Detection of Halides: Theoretical Approach" *Sensor Lett*. 16: 217–223, (2018).

24. H. Elhaes, H. Ezzat, **R. Badry**, I. S. Yahia, H. Y. Zahran and M. A. Ibrahim " The Interaction Between Carrbon Nanotube Decorated with CuO and and ZnO and Hydrogen " *Sensor Lett*. 16: 445-453, (2018).

25. H. Ezzat, **R. Badry**, I. S. Yahia, H. Y. Zahran, H. Elhaes, and M. A. Ibrahim "Mapping the molecular electrostatic potential of carbon nanotubes" *Biointerface Research in Applied Chimstry*, (2018), 8: 3539-3542, (2018).

26. **R. Badry,** A. Omar, H. Mohammed, D.Ewais, , A. Refaat and M. Ibrahim " Effect of alkaline elements on the structure and electronic properties of glycine " *Biointerface Research in Applied Chimstry*,(2018).

27. **R. Badry,** A.S.A.-E. Ghanem, H. Ahmed, A. Fahmy, A.Refaat and M.Ibrahim "Effect of li, na, K, be, mg and ca on the electronic properties, geometrical parameters of carboxylic acids" *Biointerface Research in Applied Chimstry*,(2018).

28. **R. Badry**, H. Shaban, H. Elhaes, A.Refaat and M.Ibrahim "Molecular modeling analyses of polyaniline substituted with alkali and alkaline earth elements" *Biointerface Research in Applied Chimstry*,(2018).

Awards:

- Thanks and appreciation from the Department of Physics, Faculty of Women, Ain Shams University for participating in organizing the Drawings and Hobbies Exhibition.
- Thanks and appreciation from Ain Shams University for the contribution in raising the international classification of Ain Shams University in comparison to what has been published of prestigious international research in the academic year 2021-2022, 2022-2023, and 2023-2024.
- Thanks and appreciation from the E- Learning Unit Faculty of Women, Ain Shams University for her special support and assistance to the faculty's students in using the educational platform and e-learning tools in the academic year 2022-2023.

Attend the following conferences and seminars

Master classes:

- 11th international Master Classes in ALICE-Physics, that was organized by the Egyptian center for Theoretical Physics(ECTP) and the Physics Department of Faculty of Women at Ain Shams University in Collaboration with the European Organization for Nuclear Research (CERN), 17 – 19 March, 2015, Faculty of Women - Ain Shams University, Cairo, Egypt.

Training and Summer School:

- The First Summer-Training in Theoretical Particle Physics, 2-13 August, 2005. Faculty of Women - Ain Shams University, Cairo, Egypt.
- 3rd Summer School on Basic Physics, 28 August - 8 September, 2016. Center of Fundamental Physics, Zewail City of Science and Technology, Egypt.
- Training Program on "Nano Club Activity: Molecular Modeling" for 80 hours during August, 2021.

Seminar:

- X-ray Instrumentation and Advanced Applications in Materials Science, 17th July, 2018. Dar El-Diafa, Ain Shams University, Cairo, Egypt.

Conferences (Organizer/ Attendee)

1. The 7th International Conference on Optical Spectroscopy, Laser and their Applications, 18 - 20 October, 2016. NRC, Cairo, Egypt.
2. The 10th International Conference on Nano-Technology in Construction 13-17 April, 2018. Hurgada, Egypt.
3. The 11th International Conference on Nano-Technology in Construction 22-25 March, 2019. Sharm El-Shiekh, Egypt.
4. Attended and organize "The first International Conference on Molecular Modeling and Spectroscopy, 19-22, February, 2019. National Research Centre(NRC), Cairo, Egypt.
5. The 10th International Conference on Laser Applications 35-28 November, 2019. National Institute of Laser Enhanced Sciences, Cairo University, Cairo, Egypt.
6. Attended and organize "The Second International Conference on Molecular Modeling and Spectroscopy", 23-24, September, 2020
7. The 9th Annual Ain Shams University International Conference 6-8 April, 2021. Ain Shams University, Cairo, Egypt.

8. Attended and organize “The Third Virtual International Conference on Molecular Modeling and Spectroscopy”, 15-16, September, 2021, Cairo, Egypt.

9. The 10th Annual Ain Shams University International Conference 29-31 March, 2022. Ain Shams University, Cairo, Egypt.

10. Attended and organize "The Fifth Hybrid International Conference on Molecular Modeling and Spectroscopy, 17-19, September, 2023. National Research Centre(NRC), Cairo, Egypt.

Workshops (Organizer/ Attendee)

1. Gaussian Program Workshop, 9 July- 8 August, 2017. National Research Centre(NRC), Cairo, Egypt

2. Training on Gaussian Program & Molecular Modeling Applications, 23-24 August, 2017.National Research Centre (NRC), Cairo, Egypt.

3. Attended and Organize “The Second Workshop on Estimation of HOMO-LUMO Band Gap Energy", 19-20 September, 2018. Faculty of Women - Ain Shams University, Cairo, Egypt

4. The First Workshop on Nanomaterials for Environmental and Biomedical Applications, 30 December 2018. Faculty of Education, Ain Shams University, Roxy, Cairo, Egypt.

5. Attended and organize "The First Spectroscopy Winter School", 12-16 December, 2018. Faculty of Women - Ain Shams University, Cairo, Egypt.

6. Online Workshop entitled" Information Protection and Security" 8 February 2020. Ain Shams University, Cairo, Egypt.

7. The First Online Workshop entitled "Introduction to Molecular Modeling" 5 October 2020.

8. The Second Online Workshop entitled "Application of Molecular Modeling" 7 June 2020.

9. Attended the Second Spectroscopy Winter School", 25-30 January 2020. Ismailia, Egypt.

10. Attended The Third Spectroscopy Winter School", 24-28 February 2021. National Research of Astronomy and Geophysics (NRIAG), Helwan, Egypt.

11. Workshop on "The role of the scientific woman in facing the Corona pandemic and its repercussions”, 28 December 2020. Academy of Scientific Research and Technology.

12. The Capacity Building Online Workshop ASU-TUB: Raising Awareness of Internationalization”, 18th, 25th of February and 4th of March 2021, Technische Universitat Berlin and Ain Shams University.

13. Training program on “ Nano Club Activity: Molecular Modeling” for 80 hours during August 2021, at the Nanotechnology Research Center, British University in Egypt.

14. Attended The Fourth Spectroscopy Winter School", 30 January- 7 February 2022. National Research of Astronomy and Geophysics (NRIAG), Helwan, Egypt.

15. Attended Online Workshop entitled "Strategic Planning in the Educational System", 20 March 2022, Faculty of Women, Ain Shams University, Cairo, Egypt.
16. Attended Online the Research Based Course"Atomic Astrophysics and Spectroscopy With Computational Workshops on Superstructure and The R-Matrix Codes II" , 18 June – 17 July, 2022, The OHIO State University.
17. Attended Online the Workshop entitled "Scientific Research Skills", 22 July 2022, Faculty of Education - Ain Shams University, Roxy, Egypt.
18. Attended workshop on “Synthesis and Characterization of Nanomaterial for Nuclear Applications, 18-20 September 2022, Cairo University, Egypt.
19. Attended workshop entitled “Introduction to Research Intelligence and Funding Institutional By Elsevier”, 1 August 2022, Ain Shams University
20. Attended workshop on “Planning a Successful World Class Research Article”, 31October 2022, Ain Shams University.
21. Attended The Fifth Spectroscopy Winter School, 5- 9 February 2023, NRC, Cairo, Egypt.
22. Attended The Sixth International Spectroscopy Winter School Entitled "Recent Applications of Graphene Based Systems", 03 - 27 March 2024. NRC, Cairo, Egypt.

- **<u>الدورات التدريبية</u>**

١. دوره استخدام التكنولوجيا فى التدريس فى جامعه عين شمس ٢٠١٩.
٢. دوره الاعتماد و الجوده جامعه عين شمس ٢٠١٩.
٣. دوره اداب و سلوكيات المهنة فى جامعة عين شمس ٢٠١٩ .
٤. دوره حل المشكلات فى جامعة عين شمس ٢٠١٩.
٥. دوره بنك المعرفة في جامعة عين شمس ٢٠١٩
٦. دورة الكتابة العلمية فى جامعة عين شمس ٢٠٢٠.
٧. دورة تطبيقات ميكروسوفت اوفيس ٣٦٥ (المستوى الاول) فى جامعة عين شمس ٢٠٢٠.
٨. دورة تدريبية لاستخدام نظام التعلم الإلكترونى (**Moodle**) الوحدة المركزية للتعلم الالكترونى بجامعة عين شمس ٢٠٢٠
٩. دورة النشر الدولى فى جامعة عين شمس ٢٠٢٠.
١٠. دورة اساسيات التحول الرقمي(**FDTC**) بجامعة عين شمس ٢٠٢٣
١١. دورة الجوانب القانونية في الاعمال الجامعية للهيئة المعاونة ٢٠٢٣
١٢. Educational Course entitled “ Molecular Simulation”- 26-27 September 2023- NRC

- **المقررات التدريسية (Teaching Experiences)**

١. تدريس مقرر بصريات الكترونية **(PHYS 312)** المستوى الثالث لكلآ من : برنامج الفيزياء – الفيزياء و الكيمياء – الفيزياء و الرياضيات الباحتة – الفيزياء الحيوية - الفصل الدراسي الأول للعام الجامعى ٢٠٢٣-٢٠٢٤.
٢. تدريس مقرر اهتزازات و موجات للفرقة الثانية - شعبة فيزياء تربوى انجليزي - الفصل الدراسي الأول للعام الجامعى ٢٠٢٣-٢٠٢٤.
٣. تدريس مقرر ضوء هندسي للمستوى الأول - برنامج العلوم البيولوجية / الجيولوجيا انجليزي تربوي - الفصل الدراسي الأول للعام الجامعى ٢٠٢٣-٢٠٢٤.
٤. تدريس مقرر فيزياء عامة ٢ **(PHYS102)** المستوى الأول - برنامج الكيمياء الحيوية و التغذية -الفصل الدراسي الثاني للعام الجامعى ٢٠٢٣-٢٠٢٤.
٥. تدريس مقرر ضوء هندسي **(PHYS102)** المستوى الأول - برنامج الكيمياء -الفصل الدراسي الثاني للعام الجامعى ٢٠٢٣-٢٠٢٤.
٦. تدريس مقرر اهتزازات و موجات للمستوى الأول - برنامج العلوم البيولوجية / الجيولوجيا انجليزي تربوي - الفصل الدراسي الثاني للعام الجامعى ٢٠٢٣-٢٠٢٤.
٧. تدريس مقرر بصريات الكترونية **(PHYS 312)** المستوى الثالث لكلآ من : برنامج الفيزياء – الفيزياء و الكيمياء - الفصل الدراسي الثاني للعام الجامعى ٢٠٢٣-٢٠٢٤.
٨. تدريس مقرر ضوء هندسي **(PHYS102)** المستوى الأول لكلآ من - برنامج الفيزياء- الفيزياء و الكيمياء – الفيزياء الحيوية- الفيزياء و الحاسب الآلى - الكيمياء - الكيمياء الحيوية و التغذية - الكيمياء و الحيوان- الكيمياء و النبات- الميكروبيولوجي والكيمياء - علم الحيوان - المستوى الثاني برنامج ملابس و نسيج- الفصل الدراسي الصيفي للعام الجامعى ٢٠٢٣-٢٠٢٤.
٩. تدريس مقرر بصريات الكترونية **(PHYS 312)** المستوى الثالث لكلآ من : برنامج الفيزياء – الفيزياء و الكيمياء – الفيزياء و الرياضيات الباحتة – الفيزياء الحيوية - الفصل الدراسي الأول للعام الجامعى ٢٠٢٤-٢٠٢٥.
١٠. تدريس مقرر اهتزازات و موجات للفرقة الثانية - شعبة فيزياء تربوى انجليزي - الفصل الدراسي الأول للعام الجامعى ٢٠٢٤-٢٠٢٥.
١١. تدريس مقرر ضوء هندسي للمستوى الأول - برنامج العلوم البيولوجية / الجيولوجيا انجليزي تربوي - الفصل الدراسي الأول للعام الجامعى ٢٠٢٤-٢٠٢٥.