

Manal Ahmed Gasmelseed Awad

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Profile

I have a very long proven experience in teaching and challenging students (both undergraduate and graduate student) as well as a very exciting research experience including considerable granted patents and a remarkable published articles in high rank journals cited in "Science Citation Index". I also conduct a considerable workshops and trainings, teaching and learning the students, staff members and researchers, research soft skills like creativity innovations, thinking out of the box, and scientific writing skills and concept development to pursue and gain academic and personal excellence.

Experience

- **RESEARCHER, KING ABDULLAH INSTITUTE FOR NANOTECHNOLOGY, KING SAUD UNIVERSITY, RIYADH, SAUDI ARABIA OCT |2011, TILL PRESENT|.**
- **MEMBER OF STEM UNIT, KING SAUD UNIVERSITY | 2021 TILL PRESENT|.**
- **COOPERATOR LECTURER AT FACULTY OF SCIENCE, DEPARTMENT OF PHYSICS, KING SAUD UNIVERSITY- SECOND SEMSTER |2010-2011|.**

Education

- **PH. D. PHYSICS |NOVEMBER, 2016| UNIVERSITY OF KHARTOUM |SUDAN|.**
- **M. SC. PHYSICS |JUNE, 2010| UNIVERSITY OF KHARTOUM |SUDAN|.**
- **B. SC. PHYSICS (HONORS) SECOND CLASS -DIVISION ONE, IN THE FACULTY OF SCIENCE |JULY, 2000| UNIVERSITY OF KHARTOUM |SUDAN|.**

Awards

- **KING SAUD UNIVERSITY AWARD FOR THE SCIENTIFIC EXCELLENCE. BRANCH (IV): INVENTIONS, INNOVATIONS, AND TECHNOLOGY LICENSING AWARD 1439 – 2018.**
- **AWARD OF THE BEST DISTINGUISH RESEARCHER IN WOMEN SECTION FOR (1435 H) FROM ATTRACTING OUTSTANDING FACULTY AND RESEARCHERS PROGRAM, KING SAUD UNIVERSITY (2014 - 1435 H).**
- **SUDAN INSTITUTE FOR NATURAL SCIENCES (PHYSICS) PRIZE, FOR THE ACADEMIC EXCELLENCE IN B SC. GRADUATION, SUDAN 1999 / 2000.**

PUBLICATIONS

1. Nanotherapy for Cancer and Biological Activities of Green Synthesized AgNPs Using Aqueous *Saussurea costus* Leaves and Roots Extracts. Mina A. Almayouf, Raihane Charguia, Manal A. Awad, Abir Ben Bacha and Imen Ben Abdelmalek. *Pharmaceuticals* 2024, 17, 1371. <https://doi.org/10.3390/ph17101371>.
3. Enhancing Biomedical and Photocatalytic Properties: Synthesis, Characterization, and Evaluation of Copper–Zinc Oxide Nanoparticles via Co-Precipitation Approach. Maha M. Almoneef, Manal A. Awad, Haia H. Aldosari, Awatif A. Hendi, Horiah A. Aldehish, Nada M. Merghani, Saad G. Alshammari, Latifah M. Alsuliman, Alhanouf A. Alghareeb and Magd S. Ahmed. *Catalysts* 2024, 14, 641. <https://doi.org/10.3390/catal14090641>.
4. Silver nanogranules-decorated ZnO hybrid nanostructures with enhanced UV photoresponses. Gul Naz, Hamza Khursheed, Altaf Hussain, Hafiz Muhammad Adeel Sharif, Muhammad Arshad, Faheem K. Butt, Muhammad Zubair Nawaz, Awatif A. Hendi, Maha M. Almoneef, Manal A. Awad. *Materials Today Communications* 40 (2024) 110106. <https://doi.org/10.1016/j.mtcomm.2024.110106>.
5. Harnessing *Aristolochia bracteolata* Bud Extract for Green Synthesis and Characterization of Silver Nanocomposite Films: Assessing Their Potent Antimicrobial Proficiency. Manal A. Awad, Awatif Hendi, Khalid M. Ortashi, Shareefa Alahmariye, Asma Alangery, Nada M. Merghani, Saad G. Alshammari. *Journal of Taibah University for Science*. 2024, VOL. 18, NO. 1, 2379072. <https://doi.org/10.1080/16583655.2024.2379072>
6. Exploring the multi-faceted potential: Synthesized ZnO nanostructure – Characterization, photocatalysis, and crucial biomedical applications. Maha M. Almoneef, Manal A. Awad, Haia H. Aldosari, Awatif A. Hendi, Horiah A. Aldehish, Nada M. Merghani, Saad G. Alshammari. *Heliyon* 10 (2024) e32714. <https://doi.org/10.1016/j.heliyon.2024.e32714>.
7. Designing Green Synthesis-Based Silver Nanoparticles for Antimicrobial Theranostics and Cancer Invasion Prevention. Taghrid S Alomar, Najla AlMasoud, Manal A Awad, Reem S AlOmar, Nada M Merghani, Mohamed El-Zaidy, Ajaya Bhattarai. *International Journal of Nanomedicine*, 2024:19 4451–4464. DOI <https://doi.org/10.2147/IJN.S440847>.
8. Enhanced Sunlight-driven Photocatalysis Owing to Synergetic Effect of Gold Nanoparticles-incorporated ZnO/rGO Ternary Heterostructures, Neha Athar a, Gul Naz a, Muhammad Ramzan a, Muhammad Shahid Sadiq a, Muhammad Arshad b, Hafiz Muhammad Adeel Sharif c, Awatif A. Hendi d, Maha M. Almoneef d, Manal A. Awad. *Journal of King Saud University – Science*, Volume 36, Issue 3, March 2024, 103104. <https://doi.org/10.1016/j.jksus.2024.103104>.
9. Utilizing *Cymbopogon Proximus* Grass Extract for Green Synthesis of Zinc Oxide Nanorod Needles in Dye Degradation Studies. Manal A. Awad, Awatif A. Hendi, Khalid M. O. Ortashi, Reema A. Alnamlah, Asma Alangery, Eman Ali Alshaya and Saad G. Alshammari. *Molecules* 2024, 29, 355. <https://doi.org/10.3390/molecules29020355>.
10. Plausible effect of hesperetin and nano-hesperetin against bisphenol-A induced hepatotoxicity in a rat model. Khawlah Sultan Alotaibi, Mai Elobeid, Promy Virk, Manal Ahmed Awad, Malak Abdullah Al-Qahtani, Doaa Mohamed Elnagar. *Arabian Journal of Chemistry*, Volume 17, Issue 2, February 2024, 105563. <https://doi.org/10.1016/j.arabjc.2023.105563>.
11. A comprehensive study on the influence of Mg doping on structural, AC conductivity, and dielectric behavior of ZnONPs. Manal A. Awad, Awatif A. Hendi, Maha M. Almoneef, Maymunah Alwehaibi, Khalid M. Ortashi, Wadha Alenazi, Fatimah S. Alfaihi, Shareefa Alahmariye, Asma Alangery, Warda Ali Alghoubiri, Haia

Aldosari. *Materials Chemistry and Physics*, *Materials Chemistry and Physics* 312 (2024) 128639. <https://doi.org/10.1016/j.matchemphys.2023.128639>.

12. Electrodeposited Polyaniline Based Carbon Nanotubes Fiber as Efficient Counter Electrode in Wire-Shaped Dye Sensitized Solar Cells. Awatif A. Hendi, Manal A. Awad, Khalid M. Ortashi. *Nanotechnology* DOI 10.1088/1361-6528/ad01c3.

13. Self-Regenerating Solar Evaporation System for Simultaneous salt Collection and Freshwater from Seawater. Muneerah Alomar, Badriah S. Almutairi, Seham S. Alterary, Manal A. Awad, Fida Hussain, Awatif A. Hendi, Me El-Tohamy and N. Al-Hoshani. *Water* 2023, 15, 3697. <https://doi.org/10.3390/w15203697>.

14. Electrodeposited NiCoO₂@CNTs fiber as efficient counter electrode in wire-shaped dye-sensitized solar cells. Haia Aldosari, Abid Ali, Sheza Muqaddas, Rizwan Shoukat, and Manal A. Awad. *Journal of Materials Science: Materials in Electronics (J Mater Sci: Mater Electron)* (2023) 34:1916. <https://doi.org/10.1007/s10854-023-11379-6>.

15. Wet chemical synthesis and characterization of FeVO₄ nanoparticles for super capacitor as energy storage device. Manal A. Awad, Awatif A. Hendi, Sarala Natarajan, Khalid M.O. Ortashi, Sarah S.A. Alsaif, Reema A. Alnamlah, Abeer Rasheed, Hayat Althobaiti. *Journal of King Saud University – Science* 35 (2023) 102857. <https://doi.org/10.1016/j.jksus.2023.102857>

16. Role of Biosynthesized Silver Nanoparticles with *Trigonella foenum-graecum* Seeds in Wastewater Treatment. Manal A. Awad, Promy Virk , Awatif A. Hendi, Khalid Mustafa Ortashi, Najla AlMasoud and Taghrid S. Alomar. *Processes* 2023, 11, 2394. <https://doi.org/10.3390/pr11082394>.

17. Synthesis of Nano-Crystalline Whiskers of Cheese and Their Efficacy against Cadmium Toxicity. Manal A. Awad , Meznah M. Alanazi, Awatif A. Hendi, Promy Virk, Albandari W. Alrowaily, Taghreed Bahlool, Fatimah Al-Abbas, Fatma Aouaini and Khalid M. O. Ortashi. *Crystals* 2023, 13, 1013. <https://doi.org/10.3390/cryst13071013>.

18. Attenuation of di(2-ethylhexyl)phthalate-induced hepatic and renal toxicity by naringin nanoparticles in a rat model. Malak Abdullah Al-Qahtani , Promy Virk , Manal Awad , Mai Elobeid and Khawlah Sultan Alotaibi, *Green Processing and Synthesis* 2023; 12: 20228122. <https://doi.org/10.1515/gps-2022-8122>.

19. Enhanced efficiency of flexible organic polymer solar cells by incorporation of titanium dioxide nanoparticles. Manal A. Awad, Awatif A. Hindi, Khalid M.O. Ortashi, Meznah M. Alanazi, Albandari W. Alrowaily, Taghreed Bahlool, Fatma Aouaini. *Journal of King Saud University – Science* 35 (2023) 102690. <https://doi.org/10.1016/j.jksus.2023.102690>

20. Putative anti-proliferative effect of Indian mustard (*Brassica juncea*) seed and its nano-formulation. Promy Virk, Manal A. Awad, Meznah M. Alanazi, Awatif A. Hendi, Mai Elobeid, Khalid M. Ortashi, Albandari W. Alrowaily, Taghreed Bahlool, and Fatma Aouaini. *Green Processing and Synthesis* 2023; 12: 20228119. <https://doi.org/10.1515/gps-2022-8119>.

21. Green synthesis of *Moringa oleifera* leaf nanoparticles and an assessment of their therapeutic potential. Promy Virk, Manal A. Awad, Sarah Saleh Abdu-llah Alsaif, Awatif A. Hendi, Mai Elobeid, Khalid Ortashi, Rabia Qindeel, Manal F. El-Khadragy, Hany M. Yehia, Mohamed Ferkry Serag EL-DIN, Hatem Ali Salama. *Journal of King Saud University – Science* 35 (2023) 102576. <https://doi.org/10.1016/j.jksus.2023.102576>.

22. Phytomediated synthesis of bimetallic Ag/Au nanoparticles using orange peel extract and assessment of their antibacterial and anticancer potential. Awatif A. Hendi, Manal.A. Awad, Meznah M. Alanazi, Promy Virk, Albandari W. Alrowaily, Taghreed Bahlool, Nada M Merghan, Fatma Aouaini, Basma

23. Dye-sensitized solar cells constructed using titanium oxide nanoparticles and green dyes as photosensitizers. Awatif A. Hendi, Meznah M. Alanazi, Wadha Alharbi, Taghreed Ali, Manal A. Awad, Khalid M. Ortashi, Haia Aldosari, Fatimah S. Alfaifi, Rabia Qindeel, Gul Naz, Tarfa H. Alsheddi. *Journal of King Saud University – Science* 35 (2023) 102555. <https://doi.org/10.1016/j.jksus.2023.102555>
24. Potential Role of ‘Green’ Synthesized Titanium Dioxide Nanoparticles in Photocatalytic Applications. Manal A. Awad, Meznah M. Alanazi, Awatif A. Hendi, Promy Virk, Albandari W. Alrowaily, Taghreed Bahlool, Fatehia S. Alhakami, Fatma Aouaini and Eiman Mamoun Ibrahim. *Crystals* 2022, 12, 1639. <https://doi.org/10.3390/cryst12111639>.
25. Effect of biosynthesized silver nanoparticles by *Garcinia mangostana* extract against human breast cancer cell line MCF-7. Alobaid, Hussah; Izhrani, Amal Hassan; Majrashi, Nada Ali; Alkhuriji, frah Fahad; Alajmi, Reem Atalla; Yehia, Hany Mohamed; Awad, Manal Ahmed ; Almurshedi, Alanood Sunhat; Almnaizel, Ahmad Tayseer; Elkhadragy, Manal Fawzy. *Food Science & Technology*. Volume(42), 41622. DOI10.1590/fst.41622. 2022
26. Anti-proliferative and biocidal effect of watermelon (*Citrullus lanatus*) seed extract and its nanoformulation. Promy Virk, Manal A. Awad, Mai Elobeid, Khalid M.O. Ortashi, Nada M. Merghani, Manal F. El-Khadragy. <https://doi.org/10.1016/j.matlet.2022.132809>. *Materials Letters*, (325), 15 October 2022, 132809.
27. In Silico Studies on Zinc Oxide Based Nanostructured Oil Carriers with Seed Extracts of *Nigella sativa* and *Pimpinella anisum* as Potential Inhibitors of 3CL Protease of SARS-CoV-2. Awatif A. Hendi, Promy Virk, Manal A. Awad, Mai Elobeid, Khalid M. O. Ortashi, Meznah M. Alanazi, Fatemah H. Alkallas, Maha Mohammad Almoneef and Mohammed Aly Abdou. *Molecules* 2022, 27, 4301. <https://doi.org/10.3390/molecules27134301>.
28. Attenuating effect of Indian mustard (*Brassica juncea*) seed and its nano formulation on arsenic induced-oxidative stress and associated genotoxicity in rat. Promy Virk, Sarah Turif Abdulhadi Alajmi, Manal Awad, Mai Elobeid, Khalid M.O. Ortashi, Atheer Mohammed Asiri, Nada M. Merghani, Dalia Fouad. *Journal of King Saud University – Science* 34 (2022) 102134.
29. Cytotoxicity of green-synthesized silver nanoparticles by *Adansonia digitata* fruit extract against HTC116 and SW480 human colon cancer cell lines. Fatimah Basil Almukaynizi, Maha H. Daghestani, Manal A. Awad, Arwa Althomali, Nada M. Merghani, Wadha I. Bukhari, Norah M. Algahtani, Shatha S. Al-Zuhairy, Ahlam M. AlOthman, Eman A. Alsenani, Badrih O. Alojayan, Khulud S. Al-Saif, and Ramesa Shafi Bhat, *Green Processing and Synthesis* 2022; 11: 411–422.
30. Anti-colon cancer activities of green-synthesized *Moringa oleifera*–AgNPs against human colon cancer cells. Arwa Althomali, Maha H. Daghestani, Fatimah Basil Almukaynizi, Sabah Ahmed Al-Zahrani, Manal A. Awad, Nada M. Merghani, Wadha I. Bukhari, Eiman M. Ibrahim, Sherifah M. Alzahrani, Nouf Altowair, Afaf S. AL-Ghamdi, Asma M. AlQahtani, Rasha Ramadan, and Ramesa Shafi Bhat. *Green Processing and Synthesis* 2022; 11: 545–554.
31. Green synthesis, characterization and biomedical potential of Ag@Au core–shell noble metal nanoparticles. Mona S. Alwhibi, Khalid M.O. Ortashi, Awatif A. Hendi, M.A. Awad, Dina A. Soliman, Mohamed El-Zaidy. *Journal of King Saud University – Science* 34 (2022) 102000.
32. Synthesis and characterization of noble metal/metal oxide nanoparticles and their potential antidiabetic effect on biochemical parameters and wound healing. Mai A. Elobeid, Manal A. Awad, Promy

- Virk, Khalid M. Ortashi, Nada M. Merghani, Atheer M. Asiri, and Emadeldin Abdeljabar Ali Bashir. *Green Processing and Synthesis* 2022; 11: 106–115.
33. Characterizing Silver Nanoparticles Biosynthesized From *Salvia Rosmarinus* And Assessing Their In Vitro Antifungal And Cytotoxic Activities Against Phytopathogens And Cervical Cells. H. Rizwana, S. A. Rashed!, Shehri', G. Albasher, M. A. Awad, N. Merghani and H. Tabasuum. *Journal of Animal and Plant Sciences*, 32(3) 2022.
34. Effects of Zinc Oxide Nanoparticles Synthesized Using *Aspergillus niger* on Carbapenem-Resistant *Klebsiella pneumonia* In Vitro and In Vivo. *Frontiers in Cellular and Infection Microbiology*. Elsayim Rasha, Manal M. Alkhulaifi, Monerah AlOthman, Ibrahim Khalid, Elnagar Doaa2, Khatab Alaa, Manal A. Awad and Mohnad Abdalla. November 2021, Volume 11, Article 748739. doi: 10.3389/fcimb.2021.748739.
35. Atheer M. Asiri, Mai Elobeid, Promy Virk, Manal A. Awad. Ameliorative effect of resveratrol and its nano-formulation on estrogenicity and apoptosis induced by low dose of zearalenone in male Wistar rats. *Journal of Materials Research* November 2021. DOI:10.1557/s43578-021-00425-w.
36. Najla AlMasoud, Hajar Alhaik, Malak Almutairi, Asmaa Houjak, Khlood Hazazi, Fatema Alhayek, Sarah Aljanoubi, Ahad Alkhaibari, Asma Alghamdi, Dina A. Soliman, Taghrid S. Alomar, and Manal A. Awad. Green nanotechnology synthesized silver nanoparticles: Characterization and testing its antibacterial activity. *Green Processing and Synthesis* 2021; 10: 518–528.
37. Mona S. Alwhibi, Dina A. Soliman, Manal A. Awad, Asma B. Alangery, Horiah Al Dehaish, and Yasmeen A. Alwasel. Green synthesis of silver nanoparticles: Characterization and its potential biomedical applications. *Green Processing and Synthesis* 2021; 10: 412–420. <https://doi.org/10.1515/gps-2021-0039>.
38. Nouf Abdallah Mreat Al-Ghamdi, Promy Virk, Awatif Hendi, Manal A. Awad, and Mai Elobeid. Antioxidant potential of bulk and nanoparticles of naringenin against cadmium-induced oxidative stress in Nile tilapia, *Oreochromis niloticus*. *Green Processing and Synthesis* 2021; 10: 392–402. <https://doi.org/10.1515/gps-2021-0037>.
39. Humaira Rizwana, Mona S. Alwhibi, Hadeel A. Aldarson, Manal Ahmed Awad, Dina A. Soliman, and Ramesa Shafi Bhat. Green synthesis, characterization, and antimicrobial activity of silver nanoparticles prepared using *Trigonella foenum-graecum* L. leaves grown in Saudi Arabia. *Green Processing and Synthesis* 2021; 10: 421–429. <https://doi.org/10.1515/gps-2021-0043>.
40. Manal A. Awad, Awatif A. Hendib, Khalid Mustafa Ortashi, Batool Alzahrani, Dina Solimane, Amnah Alanazid, Wadha Alenazid, Rasha Mohammed Tahaf, Rasha Ramadang, Maha El-Tohamy, Najla AlMasoudi, Taghrid S. Alomaria. Biogenic synthesis of silver nanoparticles using *Trigonella foenum-graecum* seed extract: Characterization, photocatalytic and antibacterial activities. *Sensors And Actuators A-Physical* 323 (2021) 112670. <https://doi.org/10.1016/j.sna.2021.112670>.
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42. Manal Ahmed Awad, Ebtessam Mohammed Al Olayan, Muzzammil Iqbal Siddiqui, Nada Mahmmed Merghani, Sarah Saleh Abdul-llah Alsaif, Abeer S. Aloufi. Antileishmanial effect of silver nanoparticles: Green synthesis, characterization, in vivo and in vitro assessment. *Biomedicine & Pharmacotherapy* 137 (2021) 111294. <https://doi.org/10.1016/j.biopha.2021.111294>.
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66. Manal A. Awad, Nada E. Eisa, AbdAlla S. A. Mahgoub, Khalid M. O. Ortashi, Awatif A. Hendi. Effects of Rovibrational States ($v_i=n$, $j_i=m$) on the Dissociation of Hydrogen in Nanosized Atomic Copper Clusters. Journal of Computational and Theoretical Nanoscience, Vol. 14, 5727–5730, December 2017.

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71. Manal A. Awad, Awatif A. Hendi, Khalid M. O. Ortashi, Rabab A. El Dib, Crystal Powder Silver nanoparticles Green Synthesized, Characterization, Antibacterial and Cytotoxicity Effects, Optoelectronics and Advanced Materials-Rapid Communications Journal, Vol. 9, No. 11-12, Nov. - Dec. 2015, p. 1520 - 1526.
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2. Moringa oleifera nanoparticles. US11617719B1. April 4, 2023.
3. Henna Mesoporous Silica Nanoparticles and Their Use as Anticancer Agents, SA120420304A, 1/12/2022,.
4. Method of Synthesizing Antimicrobial Silver Nanoparticles Using Pigeon Dung. 16/282,589. 13/4/2022.
5. Synthesis of Copper Oxide Nanoparticles, US 10,995,010 B1, May 4, 2021.
6. Copper Oxide Nanoparticles Synthesized using Rhatany Root Extract, US 11,001,505 B1, May 11, 2021.
7. Synthesis of Ursolic Acid Nanoparticles. US 10947265B2. Mar.16, 2021.
8. A Method of Synthesizing Custard Apple Peel Nanoparticles. US 10,946,055B2. Mar.16, 2021.
9. Method of Making Zinc Oxide Nanoparticles Using Red Sand. US 10,934,175. Mar.2, 2021.
10. Flexible solar panel. US 10,886,073. Jan.5, 2021.
11. Mangosteen Nanoparticles, US 10,898,533, Jan.26, 2021.
12. Method of Producing Eggshell-Derived Nanoparticles. US10,856,559. Dec.8, 2020.
13. Method of Synthesis of Bio Graphene Film. US 10,793,689. Oct.6, 2020.
14. Method of synthesizing antimicrobial silver nanoparticles using pigeon dung. US 2020/0268807 A1, Aug. 27 , 2020.
15. Method of Producing Silver Nanoparticles Using Red Sand. US 10,751,802 B1. Aug.25, 2020.
16. Synthesis of metal oxide nanoparticles using Kalanchoe blossfeldiana extract- US 10,703,641B1, Jul.7.2020.
17. Bio buckypaper synthesized with fish scales. US 10.689,257 B1. June 23, 2020.
18. Method of synthesizing watermelon seed particles. US 10,588,929 B1. Mar,17. 2020.
19. Methanol Extract of Grape Seed Nanoparticles. US 10,542,758 B1. Jan,28. 2020.
20. Synthesis of Black Eggplant (Solanum Melongena) Skin Antioxidant Nanoparticles. US 10500244 B1. Dec.10,2019.
21. Fabrication of Probiotics Nanowhiskers Using Cheese. US 10,517,905 B1. Dec. 31, 2019.
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26. Synthesis of Probiotic Nanoparticles, US 10,363,218 B1. Jul.30, 2019.
27. Synthesis Of Zinc Oxide Nanoparticles Using Cymbopogon Proximus Extract. US 10,358,356 B1. Jul.23, 2019.
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29. Guava seed (psidium guajava) nanoparticles as Antibacterial agent. Patent No . : US 10 , 206 , 417 B1. Date of Patent : Feb . 19 , 2019.
30. Method of synthesizing of 3 - oxolupenal nanoparticles. Patent No . : US 10 , 202 , 415 B1. Date of Patent : Feb . 12 , 2019.
31. Synthesis of silver – PMMA nanocomposite film. Patent No . : US 10 , 184 , 033 B1. 22. Jan. 2019.
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34. Synthesis of silver-PMMA nanocomposite film using herbal extract. US 10, 111,441 B1. Oct.30, 2018.
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37. Method of treating diabetic wounds using biosynthesized nanoparticles. US 9,974,749 B2. May 22, 2018.
38. Synthesis of Nuxia oppositifolia nanoparticles. US 10,028,988 B1. Jul. 24, 2018.
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41. Synthesis of adansonia digitata nanoparticles, US9789146B1. Oct.17, 2017.
42. Synthesis of Rutin Nanotubes, U.S. Patent Application No.: 15/364,225, Jul 25, 2017
43. Synthesis of Reduced Graphene Oxide Nanoparticles, US 9815701 B1. November 24, 2017.
44. Biosynthesis of Silver Nanoparticles using Microbe (Fungi) and their usage in Sewage Water Treatment, US 9428399 B1: 052016-00679, Aug 30. 2016.
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48. Synthesis of Naringenin Nanoparticles for the Treatment of Cadmium Induced Oxidative Stress , US 9,622,984 B1. Apr. 18, 2017.
49. Synthesis of Hesperetin Nanoparticles for , Treatment of Lead Induced Stress ,US 9,700,512 B1, Jul. 11.2017. USPTO.
50. Synthesis of Metals and Metal Oxide Nanoparticles using Seed Plant Extract, Docket No. 32693.19, Aug. 30. 2016. USPTO.
51. Fabrication of Rosemary Nanoparticles Encapsulated by Composite Polymer, US 9480656B1, Nov.1, 2016. USPTO.
52. Docket No. 32693.55, Method for synthesizing Noble Metal Nanoparticles using Dead Cancer Cells, Client Reference: 102015-00611,Aug. 30.2016 , USPTO.
53. Method of Preparing A Nanocomposite Film Including Starch Nanofibers, Us 9491947 B1. Nov. 1, 2016.
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58. Dye-Sensitized Solar Panel, Application No. 15/097,264, Issue Number(9517), Publication No (117380587), 12/4/2016, SAIP.
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61. طريقة لتحضير غشاء لتركيبية نانويتضمن الياف نانو نشوية، رقم البراءة(6410) ، تاريخ المنح 4 ابريل 2019م، المملكة العربية السعودية .
62. طريقة لتحضير جسيمات نانو أكسيد فلز نبييل مسامية، طريقة لتحضيرها واستخداماتها، رقم البراءة(1894) ، تاريخ المنح 9 أغسطس 2016 . المملكة العربية السعودية .

MEMBER OF COMMITTEE

Member of the Executive Committee of the Science Technology Innovation Unit (STEM Unit), 2020- till present.

Books Authored

1- الفيزياء العامة / الميكانيكا و الحرارة لطلاب و طالبات بالجامعات. دار النشر تكوين

ISSN: 1443 / 10743

ردمك : ISBN9-099-512-603-978:

2- كتاب أنابيب الكربون النانوية العلم والتطبيقات. دار التكوين للنشر. 13 يوليو م. 2023 م.

ردمك : ISBN202307091657612 :

CONFERENCES

1. Ras Al Khaimah Center for Advanced Materials (RAK CAM) The 15th Annual International Workshop on Advanced Materials Feb 19-21/2024. "Synthesis of Au/Ag composite nanoparticles from orange peel and analysis of their antibacterial and antitumor activity".

2. 10th International Conference on Emerging Materials and Nanotechnology,, Au, Ag, and Tio2 Green synthesis and applications as antibacterial for both gram positive and gram negative strain, July 27-29, 2017 Vancouver, British Columbia, Canada. RRJOMS | Volume 5 | Issue 4 | July, 2017. <https://www.rroj.com/conference-abstracts-files/au-ag-and-tio2-green-synthesis-and-applications-as-antibacteri.pdf>.

3. Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2016, "Enhancement of the dye-sensitized solar cells performance using ZnONPs, TiO2NPs and a composite of ZnO- TiO2NPs" international workshop on Advanced Materials(IWAM-2016), Ras Al Khimah/UAE.

4. <http://iwam-rakcam.com/program.html>

5. Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2015, Wafa Gahtani, Nada E.EIisa, Manal Awad. "Green Synthesis and evaluation of antimicrobial effect of silver and Titanium Dioxide nanoparticles" 6th international workshop on Advanced Materials(IWAM-2015), Ras Al Khimah/UAE.

6. Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2015, Hydrogen Economy: Dissociation of H2 on Pd Cluster as Function of Translation Energy at room Temperature" 6th international workshop on Advanced Materials(IWAM-2015), Ras Al Khimah/UAE.

7. Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2014, Biosynthesis of Titania Nanoparticles Using Lupin Bean Extract, Characterization, and Antibacterial Effects.

8. <https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnpd2FtMjAxNHxneDoyODQzNjdiM2RiZGE4OTJl>
9. Poster Presentation in the 2nd Saudi International Nanotechnology Conference 2012 (2SINC), 11-13 November 2012, the King Abdulaziz City for Science and Technology, Biogenic Synthesis of Bimetallic Ag/Au Hybrid nanoparticles by Using Orange Peel Extract
10. <http://www.kacstnano.org/2012/En/images/Publication/Proceedings/English/ENGLISH.pdf>
11. Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2012, organized by the Center for Advanced Material. Effect of Roviberational states ($v_i=n, j_i=m$) in the dissociation of Hydrogen on Nanosize of Copper Cluster. 19 February 2012, Ras Al Khaimah, United Arab Emirates.
12. https://8b709657-a-62cb3a1a-s-sites.googlegroups.com/site/iwam2012/downloads/poster_sessionII.pdf?attachauth=ANoY7crRRfXLLpH7TS7PFIFtJrUEdoHJMhszqVSHpB6aatID8fA_juh1X6_dirgs8cXvnyVqOryqgGKaRxhTDiNi10ZfqhEvNIP4rgHDcwHK94ijCLxRSGvmDZfYkxD5OsBejRfz1VZLvex8ehdlArMwaD6bmWbIgksffSksCw-C--rnwDWPQvRMuAvXwTRG37fZa_GLdNf7IvXRrAvtB9XPOGZgqEEcNCckgsQsUp7QY_aHejuCAzs%3D&attredirects=1
13. Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2012, organized by the Center for Advanced Material, Ab initio Calculation of Chemisroptions systems: H2 on Ni13, Cu13, Pd13 . 19 February 2012, Ras Al Khaimah, United Arab Emirates.
14. https://8b709657-a-62cb3a1a-s-sites.googlegroups.com/site/iwam2012/downloads/poster_sessionII.pdf?attachauth=ANoY7crRRfXLLpH7TS7PFIFtJrUEdoHJMhszqVSHpB6aatID8fA_juh1X6_dirgs8cXvnyVqOryqgGKaRxhTDiNi10ZfqhEvNIP4rgHDcwHK94ijCLxRSGvmDZfYkxD5OsBejRfz1VZLvex8ehdlArMwaD6bmWbIgksffSksCw-C--rnwDWPQvRMuAvXwTRG37fZa_GLdNf7IvXRrAvtB9XPOGZgqEEcNCckgsQsUp7QY_aHejuCAzs%3D&attredirects=1
15. Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2010, organized by the Center for Advanced Material. Collision of The Hydrogen ($v=0, j=0$) with Copper Atomic Cluster (Cu9) at (0K). 23 February 2010. Ras Al Khaimah, United Arab Emirates.
16. Participation presentation (The role of women in nanotechnology in the section Women's Center for Science and Medical Studies Malaz) in a workshop lectures introductory grant research available to students and graduate students by the Center of Excellence in the application of manufacturing using nanotechnology (CENA), Deanship of Scientific Research, King Saud University, Riyadh , Kingdom of Saudi Arabia, April 2012.
17. Presentation Molecular Dynamics Simulation Study the Collision System of the Hydrogen / Deuterium Molecules with Copper atomic Cluster (Cu9). February 2010. M. Sc. Project; University of Khartoum, Sudan.
18. Presentation Production of Dye Laser & its Applications: Case Study: Production of the Dye laser by Using the Gas of Nitrogen, Project for B. Sc; University of Khartoum Sudan, April 2000.
19. Nada E.Eisa, Shaffa A.Almehbad, Ibtessam A.Alnaim, Amira M. Ali, Eman M. Algrafy, Manal A. Awad, Nada M. Merghani. "Biosynthesis of Titania Nanoparticles Using Lupin Bean Extract, Characterization, and Antibacterial Effects" 5th international workshop on Advanced Materials(IWAM-2014), Ras Al Khimah/UAE.

SPPORTED PROJECTS

-Research project supported by the Deanship of Scientific Research at King Saud University, Member of group research, RGP- VPP-278- Nano Technology applications recent approach Used in Different Fields.

-Research project funded by the Deanship of Scientific Research at Princess Nourah bint Abdulrahman University, through the Research Groups Program Grant no. (RGP-1443-0047).

- Oriented Research Groups Program - Phase Three(2023- 2022).

SOCIETY SERVICES

- Delivering a lecture and workshop- Nanotechnology and Nano Characterization Techniques, Central Research Laboratory- Female Campus (April 29 – May1, 2024).

- Delivering a lecture at the Central Research Laboratory workshop. During this presentation, delve into the intricacies of nanomaterial characterization techniques, February 5, 2023.

- Delivering a lecture on the topic of nanophotocatalysts for the Nano Club on January 17, 2023.

- Workshop – TEM and SEM techniques- 18/ 10/2022.

Participated in the Water Hackathon hosted by the Saudi Innovation Center for Water Technologies, which spanned three days from October 20th to October 22nd, 2022.

-Conducting trainings and supervisions (in nano section) for the students (females) on nanotechnology introduction, concepts, synthesis, equipment and applications, e.g.:

1. M. Sc student from Botany and Microbiology Departments (1 students).

2. M. Sc students from Zoology Departments (4 students).

3. PhD student from Zoology Department (2 student)

4. Under graduate student from Botany and Microbiology Departments.

- Delivering a lecture, Introduction of nanotechnology, KAIN, nanoclub, January 2022.

-Delivering a lecture, Nanotechnology and characterization Techniques, Central Laboratory-Female Campus- KSU, November 2021.

-Workshop and training on Ultraviolet-visible spectrophotometry, Central Laboratory college of science, March 2022.

- Supervision on Programm I'm Researcher, Nanocatalysis, Female KAIN(2022).

- Delivering a lecture on the topic of nanophotocatalysts for the Nano Club on November 11, 2020.

- Delivering a lecture on the topic of nanophotocatalysts for the Nano Club on February,22, 2021.

- Supervision on Programm I'm Researcher, Nanocatalysis, Female KAIN(October 2,2020 – November 2, 2020).

Skills & Abilities

- Thinking out of the box
- Scientific Knowledge & Research Skills
- Problem-Solving & Innovation
- Excellent interpersonal and communication skills
- Innovative researches
- Interdisciplinary Collaboration
- Technical & Laboratory Skills
- Soft Skills

Research Interest

Nanoscience and nanotechnology, Green synthesis of Materials, Applications of nanotechnology in: Energy, Batteries, Electronics, Flexible Solar Cell, Solar Cells, Photocatalytic Applications, Hydrogen Production, Bio-nanocomposites, Hybrid Nanomaterials, Water treatment, Nano-Fibers, Nanocellulose, Biomedicine, Drug delivery, Nano-bandages.....ect.

SUPERVISION OF STUDENTS

DISSERTATIONS AND THESIS

CURRENTLY CO- SUPERVISING

- Co-supervisor, Detection and removal of antibiotics in wastewater using cellulose nanocrystals(PhD), 2024.
- Co-supervisor, The Effect of Adansonia digitata nanoparticles on colorectal cancer induced by 1, 2-Dimethylhydrazine in male Wistar albino rats(MSc), 2021.
- Co-supervisor, Phytotoxicity assessment of Graphene nanoparticles (G NPs) and Silica nanoparticles (SiO NPs)on wheat plant(Triticum aestivum L)(MSc), 2021.

CURRENTLY SUPERVISING (NANO SECTION; EXPERIMENT, CHARACTERIZATION, RESULTS AND DISCUSSION) PH.D AND MASTER'S THESES

- Ph.D theses; Effect of biosynthesized silver nanoparticles of Acacia nilotica plant extract on the gene expression of Wnt signaling pathway in breast and colon cancers cell lines
- Ph.D theses; 'Ameliorative Role of Resveratrol and its Nanoformulation against Zearalenone Induced Toxicity in Male Wistar Rat.'
- MSc theses; Putative Effects of Microplastics in Wastewater Effluent on Bioaccumulation and Biochemical Status in the Freshwater fish, Nile Tilapia (Oreochromis niloticus) and its Potential Remediation with Zinc Oxide Nanoparticles.

SUPERVISING (NANO SECTION; EXPERIMENTS, CHARACTERIZATION, RESULTS AND DISCUSSION)

- Graduate, Effect of Copper on Electronic And Optical Characteristics Of Super-Ionic Silver Iodide.
- Graduate, Modification of functionalities of pure and non-pure graphene oxide.
- Graduate, Zinc Oxide nanoparticles and dyes.
- Graduate, Synthesis of ZnO nanoparticles for use in construction of Natural Red Dye Solar Cells.
- Graduate, Zinc oxide nanometer scale and its uses in fabrication of green dye solar cell
- Graduate, Synthesis of nanoparticles for use in construction of dye of solar cell.
- Graduate, Synthesis of Titanium Nanoparticles for dye-sensitized solar cell.
- Graduate, Synthesis and characterization of AgNPs and AgNPs-GO nanocomposite for biomedical applications.
- Graduate, Synthesis and Characterization of Graphene oxide for biomedical applications.
- Graduate, Magnetic Treatment of Water: properties and Applications.

- Master, Study of cytotoxicity of As-AgNPs and the gene expression of EGFR, ERBB3, KRAS and PIK3CA genes in lung and cervical cancer cell.
- Master, Attenuating effect of Phytocompounds in Indian mustard (*Brassica juncea*) seed and its Nano formulation on Arsenic induced-oxidative stress, genotoxicity and neurotoxicity in Rat.
- Master, Attenuating Effect of Naringin Nanoparticles against Di (2-ethylhexyl) phthalate Induced toxicity in Albino Rat.
- Master's thesis 'Antioxidant Potential of Bulk and Nanoparticles of Naringenin Against Cadmium-Induced Oxidative Stress in Nile Tilapia, *Oreochromis niloticus*'.
- Master's thesis, Protective Effect of Probiotic Bacteria and its Nanoformulation against Cadmium-Induced Oxidative Stress in Male Wistar Rat.
- Master's thesis titled 'Comparative Study on the Protective Effect of Hesperetin and its Nanoformulation against Lead Induced Stress in Wistar Rat'