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Language:

Arabic

English

Gender: Female

Nationality: Sudanese

Research Interest

Bionanocomposites

Nanoscience and nanotechnology

Bio synthesis of Nanoparticles.

Rheology of Nanomaterials

Hybrid Nanomaterials

Processing of Chemical engineering

Bioapplications of

Nanomaterials .

Applications of nanotechnology in

Chemical engineering.

Applications of nanotechnology in

# Curriculum Vitae

## Manal Ahmed Gasmelseed Awad

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### QUALIFICATIONS

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- ❖ Ph. D. Physics University of Khartoum, Sudan, (November, 2016).
- ❖ M. Sc. Physics, University of Khartoum, Sudan, (June, 2010).
- ❖ B. Sc. Physics (Honors) Second Class –Division One, in the Faculty of Science, University of Khartoum, Sudan, (July, 2000).

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### PROFESSIONAL EXPERIENCE

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- ❖ Researcher, King Abdullah Institute for nanotechnology, King Saud University, Riyadh, Saudi Arabia Oct. 2011, till present.
- ❖ Cooperator Lecturer at Faculty of Science, Department of Physics, King Saud University 2010.

water treatment

Applications of nanotechnology in polymer.

Applications of nanotechnology in Desalination

Applications of nanotechnology in industrial.

Applications of nanotechnology in Energy

Applications of nanotechnology in medicine

Computer Skills:

Unix and Linux Operating Systems.

MD and Simulations Program.

Windows Vista & its Applications.

Microsoft Office Package 2007 & its Applications.

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## AWARDS

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- ❖ 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.

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## PUBLICATIONS

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1. 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.
2. Promy Virk, Mai Elobeid, Manal A Awad, Awatif A Hendi, Khalid. M. O Ortashi & Muzammil Iqbal Siddiqui. Characterization of Nanorosemary and Encapsulated Rosemary Nanoparticles and their Effect on the Lead Induced Toxicity in Wistar Rats. Acceptance May 17-2017, published in Vol

- 38 (2017). Journal of Environmental Biology.
3. Manal. A. Awad<sup>1</sup>, Awatif A. Hendi, Khalid. M. O. Ortashi, Mai A. Elobeid, Nada M. Merghani, Virk. P, Muzzammil Iqbal Siddiqui. Preparation, Characterization, and Antibacterial Agent of Eco Friendly Gold Nanorods. Tropical Journal of Pharmaceutical Research, February 2017; 16 (2): 1319-1326.
  4. Manal A Awad, Awatif A Hendi, Khalid MO Ortashi, Reem A Alotaibi and Maha Sh Sharafeldin. Synthesis, Characterization of Silver Nanoparticles Using Wet Chemical Method and their Antibacterial and cytotoxicity activities, Tropical Journal of Pharmaceutical Research, April 2016. 15 (4): 679-685.
  5. Manal A. Awad, Nada E. Eisa, AbdAlla S. A. Mahgoub, Khalid M. O. Ortashi, Awatif A. Hendi. MD Simulation Study of the Collision of a Hydrogen ( $v=0, j=0$ ) Molecule with a Nano-sized Copper Atomic Cluster ( $Cu_9$ ). Journal of Ovonic Research, Vol. 12, No. 5, September - October 2016, p. 245 - 251.
  6. Awatif A. Hendi, Doaa Elnagar, Fatheah Al hakami ;Manal Awad; The potential effects of green synthesized silver nanoparticles on liver and Pancreas in Swiss albino mice ;Journal of Nano materials and molecular nanotechnology ;5:7,2016.
  7. 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.
8. Manal A Awad, Khalid MO Ortashi, Awatif A Hendi, Nada E Eisa and Fatimah Al-Abbas. Novel Green Synthesis and Characterization of Nanopolymer Porous Gold Oxide Nanoparticles Tropical Journal of Pharmaceutical Research, October 2015. 14(10): 1763-1768.
  9. Manal A. Awad, W.K Mekhamer, Nada M. Merghani, Awatif A. Hendi, Khalid M. O. Ortashi. Fatimah Al-Abbas, and Nada E. Eisa; Green Synthesis, Characterization, and Antibacterial Activity of Silver/Polystyrene Nanocomposite. Journal of Nanomaterials Article ID 943821, Received 18 April 2015; Revised 3 June 2015; Accepted 22 July 2015.
  10. Mashail F.S. Alsayed, Alia A. Shoeib, Awatif A.Hindi, Manal A. Awad, Khalid. M. O. Ortashi; Synthesis of Silver Nanoparticles Discourage the Growth of Isolated Bacteria Invading the Blood Stream. Digest Journal of Nanomaterials and Biostructures, Vol. 10, No. 2, April - June 2015, p. 385 – 392.
  11. Awatif A. Hendia, Reem A. AlOtaibi, Manal A. Awad, Fatheah Hakami and Khalid. M. O. Ortashi. The Solution of Generalized KdV Equation by Using Laplace Adomian Decomposition Method. Indian Journal of Scientific Research; May 2014, <http://www.ijsr.in/1archive.php?id=37>.

12. Manal A. Awad<sup>1</sup>, Awatif A. Hendi<sup>2</sup>, Dalia F.A.Elradi<sup>3</sup>; Khalid M. O. Ortashi<sup>4</sup>, Nada E. Eisa<sup>5</sup>, Lamia. A. Al-lahieb<sup>6</sup>, Shorog. M. Al-Otiby<sup>7</sup>, Nada M. Merghani<sup>8</sup>, Abdelelah A. G. Awad. Silver Nanoparticles Biogenic Synthesized using an Orange Peel extract and their use as an anti-bacterial agent. International Journal of Physical Sciences, IJPS V.9(3), pp34-40, February, 2014.
13. Manal A. Awad<sup>1</sup>, Rabab A. El Dib, Nawal Almusayeib, Shaza Al-Massarani<sup>4</sup>, Khalid M. O. Ortashi, Awatif A. Hendi. Novel Balanites aegyptiaca mesocarp synthesized silver nanoparticles: formation, characterization, antimicrobial, cytotoxicity and antiviral effects. Digest Journal of Nanomaterials and Biostructures, Vol. 8, No. 4, October-December 2013, p. 1665-1677.
14. Jehad Yousef, Haifa Hendi, Fathea S. Hakami, Manal A. Awad, Ahmed F. Alem, Awatif A. Hendi, Khaled Ortashi, and Majidh F.Al-Mrshoud. Toxicity of silver nanoparticles after injected intraperitoneally in rats. Journal of American Science,2012;8(3).
15. Awatif .A .Hendi ,Fatheah A. Hendi, Manal A.Awad ,Fatheah Hakami, M. A. Abdou, and Khalid Ortashi. On the MHD stagnation-point flow in porous media. Wulfenia' Journal , Volume. 20, Issue. 3 Mar 2013.
16. Awatif .A .Hendi ,Fatheah A. Hendi, Manal A. Awad ,Fatheah Hakami, M. A. Abdou, and Khalid Ortashi. New exact travelling wave solution of MHD-Falkner-Skan Flow, 'Wulfenia' Journal ,

Volume. 20, Issue 3 2013.

17. Awatif A. Hendi; Fatheah A. Hendi; Fathea S. Hakami, Manal A. Awad and M A Abdoud. Solitary Wave Sol<sup>n</sup>s for the Generalized Fifth Order KdV eqn. Life Science Journal, 2012; 9(1).
18. Manal. A. Awad, Mai A. Elobeid, Promy Virk, Nada M. Merghani, Muzzammil Siddiqui, Khalid. M. Ortashi, Awatif A. Hendi. Characterization and Effect of Trigonilla foenum graecum (Fenugreek) Silver Nanoparticles on Bacteria and Municipal Waste Water Treatment. Submitted to the journal of Water Science and Technology.
19. Mai A Elobeid, Manal Awad, Nada Mirghani, Promy Virk. Treatment of Diabetic Rats with Nano-hilba Extracts. Submitted to the journal of Nanomaterials.
20. Mai A Elobeid, Manal Awad, Nada Mirghani, Promy Virk, Maha Elamin, Sawsan Ali and Khadiga Adham. Effect of Nano Cinnamon on Blood Glucose, Liver and Kidney Enzymes in Streptozotocin Induced Diabetic Rats. Submitted to the journal of Environmental Biology.
21. Manal Ahmed Awad<sup>1</sup>, Ebtesam Mohammed Al Olayan<sup>2</sup>, Muzzammil Iqbal Siddiqui<sup>3\*</sup>, Nada Mahmmmed Merghani. Green synthesis and characterization of Myrrh (Commiphora molmol) Silver Nanoparticle and evaluation of its cytotoxic effect on Leishmania major in Invitro and in Invivo versus the effect of chemical nanoparticles in treating subcutaneous leishmania in Balb/c mice. Submitted TJPR November 2016.

22. Ebtessam Mohammed Al Olayan, Manal Ahmed Awad, Muzzammil Iqbal Siddiqui, Nada Mahmmed Merghani. Potential therapy by Commiphora molmol (Myrrh) of Subcutaneous Leishmaniasis: Invitro and Invivo studies.
23. Sara Alsaif<sup>1</sup>, Manal A. Awad<sup>2</sup>, Ebtessam Olayan<sup>3</sup>, Muzzammil Iqbal Siddiqui, Pathogen Activities, Formation and Characterization of Bio synthesis of Curcuma Silver nanoparticles, Tropical Journal of Pharmaceutical Research, Submitted April 2016.

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## ISSUED PATENTS

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1. Noble metal nanoparticles, method for preparing the same and their application. Patent No.: US 9,463,510 B2, Date of Patent: Oct. 11, 2016,USPTO.
2. Noble metal nanoparticles, method for preparing the same and their application, EUROPEAN PATENT APPLICATION, EP 2 878 401 A1, 03.06.2015 Bulletin 2015/23.
3. Porous noble metal oxide nanoparticles, method for preparing the same and their use - King Saud University, EP 2 905 259 B1 (Published

- 31.08.2016 Bulletin 2016/35). EUROPEAN PATENT.
4. Green Nanoparticle/Polymer Nanocomposite Antimicrobial Composites, Docket No. 32693.10, November 8, 2017. USPTO.
  5. METHOD OF PREPARING A NANOCOMPOSITE FILM INCLUDING STARCH NANOFIBERS, Attorney Docket No. 32693.09, February 2015 .
  6. Docket No. 32693.55, method for synthesizing Noble Metal Nanoparticles using Dead Cancer Cells, Client Reference: 102015-00611, November 8, 2017, USPTO.
  7. Fabrication of Rosemary Nanoparticles Encapsulated by Composite Polymer, Docket No. 32693.08, December 26, 2014. USPTO.
  8. Synthesis of Metals and Metal Oxide Nanoparticles using Seed Plant Extract, Docket No. 32693.19, October 7, 2015. USPTO.
  9. Docket No. 32693.54, Synthesis of Hesperetin Nanoparticles for , Treatment of Lead Induced Stress ,Client Reference: 102015-00618, May 2016 USPTO.
  10. Docket No. 32693.56, Synthesis of Naringenin Nanoparticles for the Treatment of Cadmium Induced Oxidative Stress , Client Reference: 102015-00616 November 8, 2017. UPSTO.
  11. Attorney Docket No. 32693.92, Green Synthesis of Reduced Graphene Oxide using Nigella sativa seed extract, April 2016.



12. Attorney Docket No. 32693.57, SYNTHESIS OF metal NANOPARTICLES using an extract of Terfeziaceae , filed May 2016 USPTO.
13. Synthesis of Date Palm Seed Nanoparticles and Their use for Antibacterial Effects. Client Reference: 042016-00669, November 8, 2017.
14. Biosynthesis of Silver Nanoparticles using Microbe (Fungi) and their usage in Sewage Water Treatment, Docket No. 32809.18, Client Reference: 052016-00679, November 8, 2017.
15. SYNTHESIS OF RUTIN NANOTUBES, U.S. Patent Application No.: 15/364,225 Filed: November 29, 2016.

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## **FILED PATENTS**

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1. Synthesis of Reduced Graphene Oxide NANOPARTICLES, Attorney Docket No. 32693.90. February 24, 2017.
2. Synthesis of Adansonia digitata Nanoparticles. Docket No. 32809.60. March 7, 2017.
3. Synthesis of Nuxia Oppositifolia Nanoparticles. U.S. Patent Application No.: 15/611,768 Filed: June 1, 2017 - filed in USPTO: ‘; Application No. 15/611,768 dated June 1, 2017.
4. Synthesis of Nanoparticles Using Balanites Aegyptiaca, Docket No. 32693.35, Client Reference: 042015-00590, November 8, 2017.

5. Attorney Docket No. 32693.87. FLEXIBLE SOLAR PANEL, March 2016.
6. Attorney Docket No. 32693.86, DYE-SENSITIZED SOLAR PANEL, March 2016.
7. Attorney Docket No. 32693.85, DYE-SENSITIZED SOLAR PANEL, March 2016.
8. Attorney Docket No. 32693.91, Green Synthesis of Reduced Graphene Oxide SILICA NANOCOMPOSITE using Nigella sativa seeds extract . April 2016.
9. METHOD OF TREATING DIABETIC WOUNDS USING BIOSYNTHESIZED NANOPARTICLES, Attorney Docket No. 32693.15, 7 October 2015.
10. Bio-Nanotechnologically Derived Herbal Drugs for use against a Zoonotic Disease, Docket No. 32693.13, 01/27/2015. USPTO.

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## CONFERENCES

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- ❖ 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>.

- ❖ Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2016, “Enhancement of the dye-sensitized solar cells performance using ZnONPs, TiO<sub>2</sub>NPs and a composite of ZnO- TiO<sub>2</sub>NPs” international workshop on Advanced Materials(IWAM-2016), Ras Al Khimah/UAE.

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

- ❖ 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.
- ❖ Poster Presentation in the International Work shop for Advanced Material (IWAM) February 2015, Hydrogen Economy: Dissociation of H<sub>2</sub> on Pd Cluster as Function of Translation Energy at room Temperature” 6th international workshop on Advanced Materials(IWAM-2015), Ras Al Khimah/UAE.
- ❖ 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.

<https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnpd2FtMjAxNHxneDoyODQzNjdiM2RiZGE4OTJl>

- ❖ 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

<http://www.kacstnano.org/2012/En/images/Publication/Proceedings/English/ENGLISH.pdf>

- ❖ Poster Presentation in the International Workshop for Advanced Material (IWAM) February 2012, organized by the Center for Advanced Material. Effect of Rovibrational 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.

[https://8b709657-a-62cb3a1a-sites.googlegroups.com/site/iwam2012/downloads/poster\\_sessionII.pdf?attachauth=ANoY7crRRfXLLpH7TS7PFIFtJrUEdoHJMhszqVSHpB6aatID8fA\\_juh1X6\\_dirgs8cXvnyVqOryqgGKaRxtTDiNi10ZfqhEvNIP4rgHDcwHK94iJCLxRSGvmDZfYkxD5OsBejRfz1VZLvex8ehdlArMwaD6bmWbIgksffSksCw-C--rnwDWPQvRMuAvXwTRG37fZa\\_GLdNf7IvXRrAvtB9XPOGZgqEEcNCckgsQsUp7QY\\_aHejuCAzs%3D&attredirects=1](https://8b709657-a-62cb3a1a-sites.googlegroups.com/site/iwam2012/downloads/poster_sessionII.pdf?attachauth=ANoY7crRRfXLLpH7TS7PFIFtJrUEdoHJMhszqVSHpB6aatID8fA_juh1X6_dirgs8cXvnyVqOryqgGKaRxtTDiNi10ZfqhEvNIP4rgHDcwHK94iJCLxRSGvmDZfYkxD5OsBejRfz1VZLvex8ehdlArMwaD6bmWbIgksffSksCw-C--rnwDWPQvRMuAvXwTRG37fZa_GLdNf7IvXRrAvtB9XPOGZgqEEcNCckgsQsUp7QY_aHejuCAzs%3D&attredirects=1)

- ❖ 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.

[https://8b709657-a-62cb3a1a-s-sites.googlegroups.com/site/iwam2012/downloads/poster\\_sessionII.pdf?attachauth=ANoY7crRRfXLLpH7TS7PFIFtJrUEdoHJMhszqVSHpB6aatID8fA\\_juh1X6\\_dirgs8cXvnyVqOryqgGKaRxxTDiNi10ZfqhEvNIP4rgHDcwHK94iJCLxRSGvmDZfYkxD5OsBejRfz1VZLvex8ehdlArMwaD6bmWbIgksffSksCw-C--rnwDWPQvRMuAvXwTRG37fZa\\_GLdNf7IvXRRAvtB9XPOGZgqEEcNCckgsQsUp7QY\\_aHejuCAzs%3D&attredirects=1](https://8b709657-a-62cb3a1a-s-sites.googlegroups.com/site/iwam2012/downloads/poster_sessionII.pdf?attachauth=ANoY7crRRfXLLpH7TS7PFIFtJrUEdoHJMhszqVSHpB6aatID8fA_juh1X6_dirgs8cXvnyVqOryqgGKaRxxTDiNi10ZfqhEvNIP4rgHDcwHK94iJCLxRSGvmDZfYkxD5OsBejRfz1VZLvex8ehdlArMwaD6bmWbIgksffSksCw-C--rnwDWPQvRMuAvXwTRG37fZa_GLdNf7IvXRRAvtB9XPOGZgqEEcNCckgsQsUp7QY_aHejuCAzs%3D&attredirects=1)

- ❖ 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.

- ❖ 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.

- ❖ Presentation Molecular Dynamics Simulation Study the Collision System of the Hydrogen / Deuterium Molecules with Copper atomic Cluster (Cu<sub>9</sub>). February 2010. M. Sc. Project; University of Khartoum, Sudan.
- ❖ 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.
- ❖ 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.

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## **RESEARCHES AREAS TOPICS THAT HAS BEEN COVERED:**

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- ❖ **Nano Science, Nanotechnology Concepts, Theories, Synthesis, Equipments & Applications.**
- ❖ **Clusters Formations, Modeling, Types,**

- Features, Synthesis, Usages & Applications.
- ❖ **Molecular Dynamics Concepts, Formulations & its Applications**
  - ❖ **Molecular Dynamics Simulation (MD), Concepts, Types, Applications & the Existing Simulation Models.**
  - ❖ **Study of Collision of the Collision of the Hydrogen/ Deuterium with Copper Atomic Cluster Structure (Cu<sub>9</sub>) for the Different Possibility; i. e Direct & Indirect Dissociation; Elastic & Inelastic Scattering in Different Temperatures.**
  - ❖ **Sensitivity Analyses for Different Cases of the Collision of the Hydrogen and Deuterium with Copper Atomic Cluster Structure (Cu<sub>9</sub>) for Different Temperatures Ranges (0-1059K).**

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## **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.**

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## **Courses, Lectures and Workshops**

- ❖ **Lectures in field of nanotechnology for Nano club**

Female Center for Scientific and Medical Collages, King Saud University, 2015- 2016.

- ❖ Conducting training, lectures and workshop for the graduates students of King Saud University, 2016.
- ❖ Conducting training for the students of the Princess Nora Bint Abdul Rahman University, faculty of science, department of applied chemistry; on nanotechnology introduction, concepts, synthesis, equipment and applications, March- April- June 2015.
- ❖ Post graduate (Master) students from zoology department(1436-1437).
- ❖ Under graduate student physics department(1436-1437).
- ❖
- ❖ Participation by tow posters in the six researches day organized by Research Center, Female Center for Scientific and Medical Collages, King Saud University, 16- 17 December 2014.
  
- ❖ Conducting training for the students of the Princess Nora Bint Abdul Rahman University, faculty of science, department of applied chemistry; on nanotechnology introduction, concepts, synthesis, equipment and applications, 9/11/2014 – 23/ 11/2014.
- ❖ Supervise and conducting a practical training in theory and synthesis of nanoparticles for:
  - ❖ Post graduate students from zoology department(2014).
  - ❖ Under graduate student physics department(2014).
  - ❖ Set and implement the protocol for experiment of the effects of carbon nanotubes in growth of the



plants, which will be conducted by a students from the students year preparatory Faculties of science, funded by King Abdulaziz City for Science and Technology(2014).

- ❖ Conducting training for the students of the Princess Nora Bint Abdul Rahman University, faculty of science, department of applied chemistry; on nanotechnology introduction, concepts, synthesis, equipment and applications, 5/4/1435 – 5/2/2014 .
- ❖ Conducting training for the students of the Princess Nora Bint Abdul Rahman University, faculty of science, department of applied chemistry; on nanotechnology introduction, concepts, synthesis, equipment and applications, 9/4/1345- 9/2/2014 .
- ❖ Conducting training for the students of the Princess Nora Bint Abdul Rahman University, faculty of science, department of applied chemistry; on nanotechnology introduction, concepts, synthesis, equipment and applications.
- ❖ Several & Numerous Under graduation Reports & Projects Documentations during the Under graduation B.Sc. Study Period, 1995-2000; (University of Khartoum, Sudan).
- ❖ Several & Numerous Technical & Academic Projects in synthesis of Several & Numerous nanoparticles and their applications in Several & Numerous field medicine, energy, water treatment, and industries.
- ❖ Conducting training for the student of the

Northern Border University, Arar, Medical college, Fifth Scientific Student Conference . Saudi Arabia(1435).

- ❖ Cooperative teaching of General Physics for students year preparatory Faculties of medicine, dentistry, pharmacy and health sciences, King Saud University, Riyadh, Saudi Arabia(1432 - 1431 Second Term).
- ❖ Conducting training for the students of the Princess Nora Bint Abdul Rahman University, faculty of science, department of applied chemistry; on nanotechnology introduction, concepts, synthesis, equipment and applications.
- ❖ Preparation of nano materials for different elements that has varied nano shapes and provides graduate students to conduct their research in the field of nanotechnology.
- ❖ Presentation “Nanotechnology and their applications in life”, for the students of the Princess Nora Bint Abdul Rahman University, faculty of science, department of applied chemistry.
- ❖ Make 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.
- ❖ Applying for (3) a patents application, King Abd ulaziz City for Science and Technology, and (4) a

- patents in the University of King Saud.
- ❖ Cooperative teaching of General Physics for students year preparatory Faculties of medicine, dentistry, pharmacy and health sciences, King Saud University, Riyadh, Saudi Arabia.
  - ❖ Applied Research in Molecular Dynamics Simulations
  - ❖ -Scientific Research in Molecules Collision
  - ❖ Private Academic Education Sectors: Teaching all Physics Subjects.
  - ❖ Supervising Physics Laboratories. Department of Physics, Faculty of Science, University of Khartoum.
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## **Skills**

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- ❖ Skills in the Synthesis Nanoparticles that have been manufactured with chemicals:
  - 1- Gold nanoparticles with different methods, shapes, and sizes.
  - 2- Silver nanoparticles with different methods, shapes, and sizes.
  - 3- Zinc oxide nanoparticles with different methods, shapes, and sizes.
  - 4- Copper oxide nanoparticles with different methods, shapes, and sizes.
  - 5 Iron oxide nanoparticles with difefrent shapes, sizes, and different methods.
  - 6- Silicon dioxide spherical nanoparticles.
  - 7- Gold and Silver alloy nanoparticles.
  - 8-Silver nanowires.
  - 9- Nanofibers.

10-Titanium dioxide

11-Liposomes

- ❖ Synthesis of Nanoparticles Nanofibers by environmentally friendly materials in different ways and different forms and shapes, showed disclosures positive results and is characterized by methods as ways to new, so the statement request a applying (6) patents the University of King Saud of some of these products.
- ❖ Applied nanotechnology in different fields.

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## **SEMINARS GAVE & PARTICIPATED IN:**

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- ❖ The Top 9 Errors Arabic Academic Writers That Cause Journal Rejection. Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia 1Feubrouy 2013.
- ❖ Molecular Dynamics Simulation Study the Collision System of the Hydrogen/ Deuterium Molecules with Copper atomic Cluster (Cu9), Faculty of Education, Lab of Physics in University of Khartoum.
- ❖ Dye Laser Production & its Applications, Faculty of Science, Lab of Laser, Physics Department, Faculty of Science, University of Khartoum.
- ❖ The 8th International Conference on 'High-capacity Optical Networks and Emerging Technologies (HONET), King Saud University, Riyadh.
- ❖ Patent Filing Pathway, Intellectual Property &

technology licensing program. King Saud University, Riyadh.

- ❖ Workshop on Hydrogen and Fuel Cell Technologies, King Saud University, Riyadh.
- ❖ Femtosecond Laser Spectroscopy and 4D Electron Imaging in Materials Science, Physics ,Biology and Chemistry, King Abdulla institute for nanotechnology, King Saud University, Riyadh.
- ❖ Workshop How to Develop a Good Scientific Resarch Proposal, King Saud University, Riyadh.
- ❖ Microsoft Students Mega Meeting at King Saud University, King Saud University, Riyadh.
- ❖ Workshop How to Choose the Subject of your Search, and How to Read a Scientific Paper, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop Action (zotero) Free Alternative to the Program EndNote, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop Selection of Appropriate Reference, and Set up a Scientific Poster, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop : Working Budget: Costs and Funding Sources, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop Scientific Paper Writing, Research Publication between Good and the Bad , Research Center, Female Center for Scientific and Medical

Collages, King Saud University, Riyadh , Saudi Arabia.

- ❖ Workshop on Data Collection and Analysis, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop Survey and Questionnaire Design, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop on the Ethics of Scientific Research, Deanship of Scientific research, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshops Uses ISI databases, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop Using EndNote Web Crawler, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop Uses Database ISI Web, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop (Select topic and Formulate a Hypothesis) and ( Design and Research Methods) , Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop on Nanotechnology and their Importance in Daily Life, , King Abdulla institute

for nanotechnology, King Saud University, Riyadh.

- ❖ A series of Seminars on Women's Health .And Lifestyle, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop on Obesity and Lifestyle, Research Center, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia.
- ❖ Workshop of Elsevier Databases, Deanship of Library, Female Center for Scientific and Medical Collages, King Saud University, Riyadh , Saudi Arabia .
- ❖ Workshop the first day of excellence Research, Faculty of Science, King Saud University, Riyadh, Kingdom of Saudi Arabia.
- ❖ Workshop on scientific considerations necessary before publishing magazines ISI, Deanship of Scientific Research, King Saud University, Riyadh, Kingdom of Saudi Arabia.
- ❖ Workshop on the fourth research center of science and medical studies Malaz, Deanship of Scientific Research, King Saud University, Riyadh, Kingdom of Saudi Arabia.

