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Citations: over 20751

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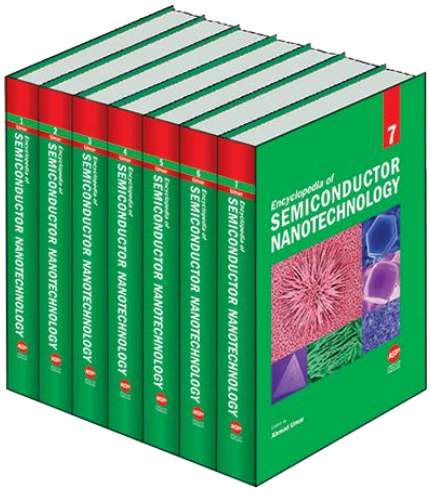

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[71] **Ahmad Umar**, Sang Hoon Kim, M. Vaseem, Y. K. Park, J. H. Kim, J-H. Kim and Y. B. Hahn, "Growth and optical properties of non-catalytically grown ZnO nanostructures by simple thermal evaporation process" KIChe Fall meeting, KAIST, October 26-27, 2007, South Korea

[70] **Ahmad Umar**, Sang Hoon Kim, M. Vaseem, Y. K. Park, J. H. Kim, J-H. Kim and Y. B. Hahn, "Formation of branched ZnO nanostructures by thermal evaporation process: Formation mechanism, structural and optical properties" KIChe Fall meeting, KAIST, October 26-27, 2007, South Korea

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[68] **Ahmad Umar**, A. Al-Hajry, S. H. Kim, M. Vaseem, Y . K. Park, J. H. Kim, J-H. Kim and Y. B. Hahn, "Hierarchical and novel nanostructures of ZnO grown by non-catalytic thermal evaporation: growth mechanism, structural and optical properties" 2007 International Conference of Nanoscience and Nanotechnology (GJ-NST2007), Kimdaejung Convention Center Gwangju, Korea, November 8-9, 2007. South Korea

[67] **Ahmad Umar**, M. M. Rahman, S. H. Kim, Y. K. Park, M. Vaseem, A. Al-Hajry and Y. B. Hahn, "ZnO nanostructure-based chemical and biosensors" 2007 International Conference of Nanoscience and Nanotechnology (GJ-NST2007) Kimdaejung Convention Center Gwangju, Korea, November 8-9, 2007., South Korea

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[64] **Ahmad Umar**, S. H. Kim, M. Vaseem, Y. K. Park, J-H. Kim, A. Al-Hajry and Y. B. Hahn, "Optical and field emission properties of ZnO nanostructure grown by non-catalytic thermal evaporation process" 2007 International Conference of Nanoscience and Nanotechnology (GJ-NST2007) Kimdaejung Convention Center Gwangju, Korea, November 8-9, 2007, South Korea

[63] Y. K. Park, **Ahmad Umar**, J. H. Kim, S. H. Kim, M. Vaseem, A. Al-Hajry, and Y. B. Hahn, "Growth mechanism and optical properties of ultra-violet emitting aligned ZnO nanotubes on silicon substrate by simple solution process" 2007 International Conference of Nanoscience and Nanotechnology (GJ-NST2007) Kimdaejung Convention Center Gwangju, Korea, November 8-9, 2007, South Korea

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[59] **Ahmad Umar**, S. H. Kim, J. H. Kim, Y. K. Park, M. Vaseem, J-H. Kim and Y. B. Hahn Synthesis, electrical, optical and photoresponse properties of single-crystalline ZnO nanowires grown on aluminum foil by thermal evaporation" Nano Korea, 2007, Seoul, Korea.

[58] **Ahmad Umar**, S. H. Kim, J. H. Kim, Y. K. Park, Y. B. Hahn, "Fabrication of glucose and hydrazine electrochemical sensors using ZnO nanonails grown by the thermal evaporation" International Conference on Materials for Advanced technologies, 2007 (ICMAT, 2007) Singapore, July, 1-6, 2007

[57] **Ahmad Umar**, S. H. Kim, J. H. Kim, Y. K. Park, Y. B. Hahn, "Fabrication of ZnO nanowires based field effect transistors (FETs)" International Conference on Materials for Advanced technologies, 2007 (ICMAT, 2007) Singapore, July, 1-6, 2007

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[55] **Ahmad Umar**, S. H. Kim, J. H. Kim, Y. S. Park and Y. B. Hahn, "ZnO nanonails based biosensors for the detection of glucose and hydrazine" E-MRS-2007 Spring meeting, Strasbourg, France, May 28th- June 1, 2007,

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[53] **Ahmad Umar**, S. H. Kim, J. H. Kim, Y. S. Park and Y. B. Hahn, "Fabrication of Electrochemical Biosensors for the Detection of Glucose and Hydrazine using ZnO Nanonails grown by Thermal Evaporation Process" May, 20-24, 2007.

[52] **Ahmad Umar**, S. H. Kim, J. H. Kim, Y. S. Park and Y. B. Hahn, "Structural and optical properties of multipod ZnO nanostructures by cyclic feeding chemical vapor deposition process" Third Asia-Pacific Workshop on Widegap Semiconductors (APWS-2007) March 11 - 14, 2007, Jeonju, South Korea.

[51] **Ahmad Umar**, S. H. Kim, Y. S. Park, J. H. Kim and Y. B. Hahn "Optical and Electrical properties of ZnO nanowires" Third Asia-Pacific Workshop on Widegap Semiconductors (APWS-2007) March 11 - 14, 2007, Jeonju, South Korea.

[50] **Ahmad Umar**, S. H. Kim, J. H. Kim, Y. S. Park and Y. B. Hahn "Temperature - controlled catalyst-free synthesis of UV-emitting ZnO nanostructures by thermal evaporation" Third Asia-Pacific Workshop on Widegap Semiconductors (APWS-2007) March 11 - 14, 2007, Jeonju, South Korea.

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[47] **A. Umar** and Y. B. Hahn, "Formation of ZnO nanostructures by the temperature-controlled non-catalytic growth process: structural and optical properties", 7th Korea-Japan symposium on materials, October 19~21, 2006, Gyeongju, Korea.

[46] **A. Umar**, S. H. Kim, Q. Ahsanul Haq, J. H. Kim, Y.K. Park, Y. B. Hahn, "Growth mechanism, structural and optical properties of hexagonal ZnO nanocolumns by thermal evaporation", 7th Korea-Japan symposium on materials, October 19~21, 2006, Gyeongju, Korea.

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substrate by cyclic feeding chemical vapor deposition process", 7th Korea-Japan symposium on materials, October 19~21, 2006, Gyeongju, Korea.

[44] **A. Umar**, Q. Ahsanul Haq, S. H. Kim, Y.K. Park, J. H. Kim, Y. B. Hahn, "High-yield synthesis of single-crystal nanocombs of ZnO: Growth mechanism, structural and optical properties", 7th Korea-Japan symposium on materials, October 19~21, 2006, Gyeongju, Korea.

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[42] Q. Ahsanulhaq, **A. Umar**, S. H. Kim, J. H. Kim, Y.K. Park Y. B. Hahn, "A surfactant-free Synthesis of ZnO microspheres composed of Curved nanosheets and hexagonal microdiscs by low-temperature solution chemistry", 7th Korea-Japan symposium on materials, October 19~21, 2006, Gyeongju, Korea.

[41] Q. Ahsanulhaq, Y.K. Park, **A. Umar**, S. H. Kim, J. H. Kim, Y. B. Hahn, "A template-less surfactant-free and seedless aqueous route to single crystal ZnO nanowires synthesis: structural and optical properties", 7th Korea-Japan symposium on materials, October 19~21, 2006, Gyeongju, Korea.

[40] Seung-Yong Lee, **Ahmad Umar**, Duk-II Suh, Ji-Eun Park, Yoon Bong Hahn and Sang-Kwon Lee, IEEE Nanotechnology, Materials and Devices, 2006, October 22-25, 2006, Gyeongju, Korea.

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[37] **Ahmad Umar**, H. W. Ra and Yoon-Bong Hahn, "Non-catalytic growth of ZnO nanostructures: growth mechanism, structural and optical properties and their applications" Sohn International symposium on advanced processing of metals and materials: principles, technologies and industrial practice", August 27-31, 2006 San Diego, CA, USA.

[36] **Ahmad Umar** and Yoon Bong Hahn, "Evolution of ZnO nanostructures by the temperature controlled non-catalytic growth process on steel alloy substrate: Structural and Optical properties" Nano Korea, August 28- September 1, 2006, Seoul, Korea.

[35] **Ahmad Umar** and Yoon Bong Hahn, "Formation of hierarchical ZnO nanostructures "nanocombs": growth mechanism, structural and optical properties" Nano Korea, August 28- September 1, 2006, Seoul, Korea.

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[33] **Ahmad Umar**, S. H. Kim, Y. H. Lim and Y.B. Hahn, "Structural and optical properties of Single crystal ZnO nanowires grown on steel alloy substrate by the chemical vapor deposition", Nano Structure Science & Technology Symposium 2 (NTST-2), August 11-13, 2005, California, USA

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[31] **A. Umar**, Sang Hoon Kim, Yoon-Bong Hahn, "Evolution of ZnO Nano structures on Si by Vapor-Solid Mechanism in a Single reactor: Structural and Optical Properties", The 47th TMS Electronic Materials Conference, June 22-24, 2005, University of California, USA.

[30] **A. Umar**, S. H. Kim, Y. H. Lim, and Y. B. Hahn, "Synthesis and Growth mechanism of ZnO micro spheres and cages by thermal evaporation method" E-MRS Spring Meeting, May 31- June 3, 2005, Strasbourg, France.

[29] A. Sekar, S. H. Kim, **A. Umar** and Y. B. Hahn, "Sea-Urchin like ZnO Nanostructures on Si by Oxidation of Zn metal powders", E-MRS Spring Meeting, May 31- June 3, 2005, Strasbourg, France.

[28] **Ahmad Umar**, Sang-Hoon Kim, Yong-Hwan Lim, Yoon-Bong Hahn, "Structural and optical properties of sea-urchin like ZnO nanostructures grown on Si(100) substrate", Second Asia-Pacific Workshop on Widegap Semiconductors (APWS-2005) March 7 - 9, 2005, Hsinchu, Taiwan.

[27] **A. Umar**, S. Lee, S. H. Kim, Y. H. Lim, and Y. B. Hahn, "Catalyst-Based Atomic Layer Deposition of Star-Shaped ZnO Nanostructures", Nano Korea 2004: 2004 International Nanotech Symposium & Exhibition in Korea, Seoul KOEX, Korea, Aug. 24-27, 2004.

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[25] S. Lee, **A. Umar**, Y. B. Hahn, "Structural and Optical Properties of ZnO Nanoparticles by ALD", The 6th Japan-Korea Symposium on Materials and Interfaces, Beppu, Japan, Oct. 21-24, 2004.

[24] **A. Umar**, S. Lee, Y. B. Hahn, "Atomic Layer Deposition of Star-Shaped ZnO Nanostructures", The 6th Japan-Korea Symposium on Materials and Interfaces, Beppu, Japan, Oct. 21-24, 2004.

[23] **A. Umar**, S. H. Kim, J. H. Kim, Q. Ahsanul Haq, Y.K. Park, J. C. Li, Y. B. Hahn "Formation of ZnO nanostructures on silicon substrate by cyclic feeding chemical vapor deposition: Structural and optical properties" KIChe Fall meeting, Seoul, October 27-28, 2006.

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[19] Q. Ahsanulhaq J. H. Kim, S. H. Kim, **A. Umar**, J. C Li, Y.K. Park, Y. B. Hahn "Effect of substrate on the growth of ZnO nanorods by low temperature solution method" KIChe Fall meeting, Seoul, October 27-28, 2006.

[18] Q. Ahsanulhaq, Y. K. Park, S. H. Kim, J. H. Kim, **A. Umar**, J. C. Li, Y. B. Hahn "Interpenetrative growth of ZnO nanopushpin-like nanorods and acicular growth of nanorods by low temperature solution method on copper foil and silicon substrate" KIChe Fall meeting, Seoul, October 27-28, 2006.

[17] Q. Ahsanulhaq, S. H. Kim, **A. Umar**, J. H. Kim, J. C. Li, Y.K. Park, Y. B. Hahn "A general low temperature route for large-scale fabrication of high-aligned ZnO nanorods" KIChe Fall meeting, Seoul, October 27-28, 2006.

[16] **A. Umar**, and Y. B. Hahn, "Catalyst-free synthesis of coaxial-shaped hexagonal ZnO nanocolumns by thermal evaporation: Growth mechanism and Structural and Optical properties" KIChE / IEC spring Meeting, Daegu, April 20-21, 2006.

[15] **Ahmad Umar**, Sang-Hoon Kim, Hyun-Wook Ra and Yoon-Bong Hahn, "Effect of temperature and pretreatment on the morphologies of ZnO Nanostructures in a single reactor: Structural and Optical Properties" KIChE / IEC spring Meeting, Daegu, April 20-21, 2006.

[14] **Ahmad Umar**, Hyun-Wook Ra, Sang-Hoon Kim and Yoon-Bong Hahn, "Two-step growth of perfectly hexagonal-shaped ZnO nanowires and nanorods on silicon substrate by thermal evaporation: Structural and Optical Properties" KIChE / IEC spring Meeting, Daegu, April 20-21, 2006.

[13] Ahsanulhaq, **A. Umar**, Y. H. Lim, Y. B. Hahn, "Formation of ZnO micro spheres made up of nano-petals and ZnO hexagonal micro disks at low temperature on different substrates" KIChE Fall Meeting, October 21-22, 2005.

[12] **A. Umar**, S. H. Kim, H. W. Ra, Y. H. Lim, Y. B. Hahn, "Non-catalytic growth of ZnO microspheres and cages: Structural and Optical properties" KIChE Fall Meeting, October 21-22, 2005.

[11] **A. Umar**, S. H. Kim, H. W. Ra, Ahsanulhaq, Y. H. Lim, Y. B. Hahn, "Non-catalytic growth of ZnO nanostructures on silicon by vapor-solid mechanism: Structural and Optical properties" KIChE Fall Meeting, October 21-22, 2005

[10] **Ahmad Umar**, S. H. Kim, Yong Whan Lim and Y. B. Hahn "Catalyst-Free Synthesis of ZnO nanorods on Silicon by Thermal Evaporation: Structural and Optical properties", 3rd ZnO workshop, 7th October 2005, Korea University, South Korea

[9] H. W. Ra, **Ahmad Umar**, S. H. Kim and Y. B. Hahn "Structural and Optical Properties of ZnO Nanowires on Steel Alloy substrate by Thermal Evaporation", 3rd ZnO workshop, 7th October 2005, Korea University, Seoul, Korea

[8] Yong Whan Lim, **Ahmad Umar**, H. W. Ra and Y. B. Hahn "Star and Flower-Shaped ZnO nanostructures on Silicon by Cyclic Feeding Chemical Vapor Deposition", 3rd ZnO workshop, 7th October 2005, Korea University, Seoul, Korea

[7] S. H. Kim, **Ahmad Umar**, H. W. Ra and Y. B. Hahn. "Catalyst- Free Synthesis of ZnO micro-spheres and cages by the thermal evaporation: Structural and Optical properties", 3rd ZnO workshop, 7th October 2005, Korea University, Seoul, Korea

[6] S. Lee, Y. H. Lim, **Ahmad Umar**, S. H. Kim, Y. B. Hahn, "Atomic layer deposition of high quality ZnO films grown on homo buffer layer: structural and optical properties" KIChE Spring Meeting, April 22~23, 2005.

[5] **Ahmad Umar**, Sekar Armugam, S. H. Kim, Y. H. Lim, Y. B. Hahn "Structural and optical properties of Sea-Urchin like ZnO structures grown on Si(100) substrate", KIChE Spring Meeting April 22~23, 2005.

[4] **Ahmad Umar**, Hyun Wook Ra, and Y. B. Hahn, "Evolution of ZnO nanostructures on Si by vapor-solid mechanism in a single reactor: Structural and Optical properties", The 3rd Symposium for Nano-Chemical Processing, August 26, 2005, Korea University, Seoul, Korea.

[3] **A. Umar**, S. Lee, S. H. Kim, H. W. Ra, Y. B. Hahn, "Structural and Optical Properties of Flower and Needle-shaped ZnO Nanostructures by ALD", KIChE / IEC Fall Meeting, Hoseo Univ., Oct. 29-30, 2004.

[2] S. Lee, **Ahmad Umar**, Y. H. Lim, S. H. Kim, H. W. Ra, Y. B. Hahn, "Structural and optical properties of ZnO Nanoparticles grown by Atomic Layer Deposition", KIChE / IEC Fall Meeting, Hoseo Univ., Oct. 29-30, 2004.

[1] **Ahmad Umar**, S. A. A. Nami and K. S. Siddiqi, "Chloride ion transfer in a polar solvent" in 21st Conference of Indian Council of Chemists held at Jabalpur during 24 – 26 October 2002.

SYNERGISTIC ACTIVITIES

- Serve as a session chair for the session of Nano Fabrication/MEMS/Bio-MEMS-1 in the International Conference, i.e. 2007 International Conference of Nanoscience and Nanotechnology (GJ-NST2007) Kimdaejung Convention Center Gwangju, Korea, November 8-9, 2007.
- Served as session chair in the "The Fifth Meeting of the Saudi Physical Society (SPS5): Physics and Energy Horizons", October 25-27, 2010, King Khalid University, Abha, Saudi Arabia
- Served as session chair in the "International workshop on Advanced Materials, sensors, electronic devices and renewable energy (IWASER-2012)", 14-16 May, 2012, Najran University, Najran, Kingdom of Saudi Arabia
- Senior Organizing committee member, "International workshop on Advanced Materials, sensors, electronic devices and renewable energy (IWASER-2012)", 14-16 May, 2012, Najran University, Najran, Kingdom of Saudi Arabia
- Organizing committee member, "International workshop on Advanced Materials, sensors, electronic devices and renewable energy (IWASER-2012)", 14-16 May, 2012, Najran University, Najran, Kingdom of Saudi Arabia
- Scientific committee, "International workshop on Advanced Materials, sensors, electronic devices and renewable energy (IWASER-2012)", 14-16 May, 2012, Najran University, Najran, Kingdom of Saudi Arabia
- Foreign expert for PH.D theses obtained from different countries such as China, Malaysia, India, etc.
- Examiner for theses from local Saudi Universities, like King Saud University, King Abdulaziz University, etc.
- Council member of Promising Centre for Sensors and Electronic Devices (PCSED)
- Papers reviewed for many high impact journals.
- Cover art for Chemical Communications (2008), Journal of Nanoscience and Nanotechnology (2007), Science of Advanced Materials (2015), Metal Oxide Nanostructures and Their Applications (2010), Encyclopedia of Semiconductor Nanotechnology (2015)
- Scientific Committee member for **MCARE2015** (Materials Challenges in alternative and renewable energy 2015) will be held in Jeju, Korea, on 24-27 February, 2015
- External Reviewer for the Following Theses:

- **M.Sc.:** King Saud University (2012)
- **Ph.D.:** Pune University (2011); Cairo University (2011); Kashmir University (2012), University Putra Malaysia (2014); University Putra Malaysia (2014); University of Putra Malaysia (2015)

INVITED TALKS

[1] **Ahmad Umar**, Suk Lee and Yoon- Bong Hahn, "Non-catalytic Growth of ZnO Nanostructures: Overview on Growth Mechanism, Structural and Optical Properties", The 3rd Symposium for Nano-Chemical Processing, 2005 August 26, Korea University, Seoul, Korea.

[2] Yoon-Bong Hahn, **Ahmad Umar**, Hyun-Wook Ra, "Non-catalytic growth of ZnO nanostructures: Growth Mechnism, Structural and Optical Properties, and Applications", Shon Internaitonal Symposium on Advanced Processing of Metals and Materials", San Diego, Aug. 27-31, 2006.

[3] **Ahmad Umar**, S. H. Kim, Y. H. Lim, Y. B. Hahn, "Structural and optical properties of single crystal ZnO nanowires grown on steel alloy substrate by chemical vapor deposition", 2005 U.S.-Korea Conference on Science, Technology, and Entrepreneurship, Univ. of Irvine, Aug. 11-13, 2005.

[4] **Ahmad Umar**, and Yoon-Bong Hahn, "Metal Oxide Nanostructures based Chemical and Biosensors", 8th International Conference on Physics of Advanced Materials, Iasi, Romania, June 04-07, 2008

[5] **Ahmad Umar**, Yoon-Bong Hahn, S. H. Kim, "Fabrication of ZnO Nanostructures and their Applications as Glucose Biosensors and Hydrazine Chemical Sensors", ICON008, An International Conference organized by Centre of Nanotechnology, King Abdul Aziz University, Jeddah, Saudi Arabia, June. 17-19, 2008

[6] **Ahmad Umar** and Y. B. Hahn, "Metal Oxide Nanostructures based chemical and biosensors", IUMRS-ICA, December 9-13, **2008**, Nagoya Congress Center, Nagoya, JAPAN

[7] **Ahmad Umar**, "Metal Oxide Semiconductor Nanostructures: From Growth to Devices" A **special lecture** in the Faculty of Science, King Abdul Aziz University, Jeddah, Saudi Arabia, January, 27, 2009

[8] **Ahmad Umar**, "Semiconductor Metal Oxide Nanostructures: From Growth to Applications" an "International interdisciplinary Science Conference-2010 on Nanobiotechnoly: An interface between Physics and Biology" organized by Jamia Millia Islamia, December 2-4, 2010 New Delhi, India

[9] **Ahmad Umar**, "Metal Oxide Nanostructures: From Growth to Applications" A **special lecture** in the Faculty of Science, Punjab University, Punjab, Chandigarh, India, November 30, 2010

[10] **Ahmad Umar**, "Semiconductor Nanomaterials: Interdisciplinary Applications" A **special lecture** in the Faculty of Science, Himachal Pradesh University, Shimla, Himachal Pradesh, India, December 21, 2010

[11] **Ahmad Umar**, "Nanomaterials" A **special lecture** in the Faculty of Science, Himachal Pradesh University, Shimla, Himachal Pradesh, India, October, 2011

[12] **Ahmad Umar**, "Nanoscience and Nanotechnology" A **special lecture** in the Faculty of Science, Punjab University, Punjab, Chandigarh, India, November, 2012

[13] **Ahmad Umar**, "Nanotechnology: Concept and Applications" A **special lecture** in the Himachal Pradesh University, Shimla, University, December 2013

REVIEWD ARTICLES FOR THE FOLLOWING JOURNALS

[1] Nanotechnology (IOP, Publishing)

[2] Journal of Physical Chemistry (American Chemical Society, Publishing)

[3] ACS Applied Materials and Interfaces

[4] Nanoscale

[5] Applied Catalysis A

[6] Nano Letters

[7] Inorganic Chemistry (American Chemical Society, Publishing)

[8] Journal of Environmental Chemical Engineering

[9] Journal of Alloys and Compounds

[10] Journal of Nanoscience and Nanotechnology (American Scientific Publishers)

[11] Talanta (Elsevier, Publishing)

[12] Science of Advanced Materials (American Scientific Publishers)

[13] Catalysis Communications (Elsevier, Publishing)

[14] Crystal Growth and Design (American Chemical Society, Publishing)

[15] Electrochemistry Communications (Elsevier, Publishing)

[16] Journal of Pakistan Chemical Society (Pakistan Chemical Society)

[17] Advanced Science Letters (American Scientific Publishers)

[18] Nanoscale Research Letters (Springer Link Publisher)

[19] Bio-electrochemistry (Elsevier, Publishing)

[20] Langmuir (American Chemical Society, Publishing)

[21] Journal of Alloys and Compounds

[22] International Journal of Nano-manufacturing,

[23] Superlattices and Microstructures

[24] International Journal of Nanoscience

[25] Advanced Powder Technology

[26] Electrochimica Acta

[27] Journal of Inorganic and Organometallic Polymers and Material

[28] Journal of Optoelectronics and Advanced Materials

[29] Sensors & Actuators: A. Physical

[30] Materials Research Bulletin (Elsevier, Publishing)

[31] Applied Surface Science (Elsevier, Publishing)

[32] Materials Letters (Elsevier, Publishing)

[33] Sensor Letters (American Scientific Publishers)

[34] International Journal of Environmental Analytical Chemistry

[35] RSC Advances

[36] Ceramic International

[37] Journal of Electroanalytical Chemistry

And many more

Research Grants Awarded

As Principle Investigator:

1) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: Low-temperature facile growth of metal oxides and sulphides nanostructures for chemical sensor applications
Research Grant: 246,500 Saudi Riyals
Duration: 18 Months (2011)
Status: Completed

2) Funding Agency: Deanship of Scientific Research, NU
Title: Synthesis, characterizations and potential applications of Copper Oxide nanostructures
Research Grant: 98, 000 Saudi Riyals
Duration: 12 Months (2011)
Status: Completed

3) Funding Agency: Deanship of Scientific Research, NU
Title: Growth of doped and undoped ZnO nanostructures for clean energy applications
Research Grant: 98, 000 Saudi Riyals
Duration: 12 Months (2011)
Status: Completed

4) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU

Title: Fabrication of ID undoped and doped ZnO nanostructures for efficient field emission device applications
Research Grant: 249,500 SR
Duration: 12 Months (2011)
Status: Completed

5) Funding Agency: Deanship of Scientific Research, NU
Title: Fabrication and characterization of selective and sensitive gas sensors based on Metal oxide nanomaterials
Research Grant: 93, 000 Saudi Riyals
Duration: 12 Months (2012)
Status: Completed

6) Funding Agency: Deanship of Scientific Research, NU
Title: Direct growth of perforated ZnO nanosheets made by accumulation of nanoparticles on FTO substrate for DSSC application
Research Grant: 95, 000 Saudi Riyals
Duration: 12 Months (2013)
Status: Completed

7) Funding Agency: Deanship of Scientific Research, NU
Title: Highly sensitive chemical sensor based on CuO rosette-like nanostructures
Research Grant: 97, 000 Saudi Riyals
Duration: 12 Months (2013)
Status: Completed

8) Funding Agency: Deanship of Scientific Research, Najran University, Najran
Title: Doped Zinc Oxide nanomaterials for chemical sensor application
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2016-2017)
Status: Completed

9) Funding Agency: Deanship of Scientific Research, Najran University, Najran
Title: Fabrication and characterization of Dye-sensitized solar cell based on ZnO nanostructures
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2016-2017)
Status: Completed

10) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: Fabrication and characterization of high-stable novel field emitters based on ZnO nanostructures
Research Grant: 200,000 Saudi Riyals
Duration: 18 Months (2016-2017)
Status: Completed

11) Funding Agency: Deanship of Scientific Research, Najran University, Najran, Kingdom of Saudi Arabia
Title: Fabrication and characterization of chemical sensor based on Lanthanum oxide nanodisks
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2018-2019)
Status: Completed

12) Funding Agency: Deanship of Scientific Research, Najran University, Najran, Kingdom of Saudi Arabia
Title: Direct growth of ZnO nanoflowers on FTO substrate for dye-sensitized solar cell application
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2018-2019)
Status: Completed

13) Funding Agency: Deanship of Scientific Research, Najran University, Najran, Kingdom of Saudi Arabia
Title: Highly sensitive nitroaniline chemical sensor based on rare-earth metal ion/oxide-metal oxide based nanomaterials
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2018-2019)
Status: Completed

14) Funding Agency: Deanship of Scientific Research, Najran University, Najran, Kingdom of Saudi Arabia
Title: Doped ZnO nanomaterials for enhanced gas sensing applications
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2019-2020)
Status: Completed

15) Funding Agency: Deanship of Scientific Research, Najran University, Najran, Kingdom of Saudi Arabia
Title: Oxide nanomaterial (Cobalt oxide as model material) as potential electrocatalyst for Oxygen evolution
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2019-2020)
Status: Completed

16) Funding Agency: Deanship of Scientific Research, Najran University, Najran, Kingdom of Saudi Arabia
Title: High performance chemical sensor based on rare-earth oxide nanomaterials
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2019-2020)
Status: Completed

17) Funding Agency: Promising Centre for Sensors and Electronic Devices, Ministry of Education, Saudi Arabia
Title: Fabrication and characterizations of efficient Chemisensors based on Semiconductor nanomaterials.
Research Grant: 100,000 Saudi Riyals
Duration: 18 Months (2018-2020)
Status: Completed

18) Funding Agency: Promising Centre for Sensors and Electronic Devices, Ministry of Education, Saudi Arabia
Title: Functional Nanomaterials based gas sensors: experimental and theoretical aspects.
Research Grant: 100,000 Saudi Riyals
Duration: 18 Months (2018-2020)
Status: Completed

19) Funding Agency: Promising Centre for Sensors and Electronic Devices, Ministry of Education, Saudi Arabia
Title: Graphene based room-temperature sensors
Research Grant: 350,000 Saudi Riyals
Duration: 24 Months (2018-2021)
Status: On Going

20) Funding Agency: Ministry of Education, Kingdom of Saudi Arabia
Title: Ultrasensitive environmental room-temperature gas sensor based on supramolecularly assembled graphene composites
Research Grant amount: 1,600,000 Saudi Riyals
Duration: 36 Months (2020-2023)
Status: On going

21) Funding Agency: Institutional Funding, Ministry of Education, Kingdom of Saudi Arabia
Title: Advanced Applications of functional nanomaterials.
Research Grant amount: 200,000 Saudi Riyals
Duration: 18 Months (2020-2021)
Status: On going

22) Funding Agency: Institutional Funding, Ministry of Education, Kingdom of Saudi Arabia
Title: Functional nanomaterials for energy and environmental applications.
Research Grant amount: 200,000 Saudi Riyals
Duration: 18 Months (2020-2021)
Status: On going

As Co-Investigator:

23) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Fabrication of gas sensing system for solid state gas sensors
Duration: 09 Months (2010)
Status: Completed

24) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: ZnO nanostructures based substrates for the improvement of dye-sensitized solar cells
Duration: 09 Months (2010)
Status: Completed

25) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Fabrication of field emission devices based on ZnO nanostructures
Duration: 09 Months (2011)
Status: Completed

26) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: Fabrication and Characterization of high-performance electronic devices based on doped and undoped ZnO nanostructures
Research Grant: 249,500 SR
Duration: 18 Months (2012)
Status: Completed

27) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: Highly sensitive and selective biosensors fabricated based on the utilization of semiconductor nanomaterials as efficient electron mediators
Research Grant: 250, 000 SR
Duration: 18 Months (2012)

28) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Synthesis and characterization of ferrite nanomaterials for phenyl hydrazine chemical sensor applications
Duration: 09 Months (2012)
Status: Completed

29) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Synthesis and characterization of ZnO nanosheets for dye-sensitized solar cell applications
Duration: 09 Months (2013)
Status: Completed

30) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: n-ZnO based nanostructures/p-Si substrate based efficient p-n heterojunction diodes
Duration: 09 Months (2013)
Status: Completed

31) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Glucose biosensor based on copper oxide based nanostructures
Duration: 09 Months (2013)
Status: Completed

32) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: Doped and undoped semiconductor nanostructures for efficient p-n heterojunction diodes applications
Research Grant: 239,500 SR
Duration: 18 Months (2013),
Status: Completed

33) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: Single nanowire based ultra-low voltage field ionization sensor with engineered nanotips: design, fabrication and prototype
Research Grant: 248,000 SR
Duration: 18 Months (2013)

34) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: The synthesis of the Optimum Hybrid Nano-structured Metal-Carbon-Polymer composites (MCP) for Electrochemical Sensor
Research Grant: 200,000 SR
Duration: 18 Months (2013)

35) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Growth and properties of Sn-doped ZnO nanowires for heterojunction diode application
Duration: 09 Months (2013)
Status: Completed

36) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: Fabrication and characterization of ZnO nanowires/nanorods based high-stable novel field emitters
Research Grant: 249,000 SR
Duration: 18 Months (2014)

37) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah

Title: Temperature dependant electrical properties of Ga-doped ZnO nanoneedles grown on p-Si substrate
Duration: 09 Months (2014)
Status: Completed

38) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Highly sensitive hydroquinone chemical sensor based on $Cd_{0.5}Mg_{0.4}Ca_{0.1}Fe_2O_4$ nanoparticles
Duration: 09 Months (2014)
Status: Completed

39) Funding Agency: King Abdulaziz City for Science and Technology (KACST), Riyadh
Title: Doped and undoped nanostructured metal oxides for the detection of hazardous gases
Duration: 24 Months (2014)
Research Grant: 1,989,400 SR
Status: Completed

40) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Low-temperature grown ZnO nanoflakes for dye sensitized solar cell application
Duration: 09 Months (2015)
Status: Completed

41) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Functional semiconductor nanomaterials for highly sensitive chemical/gas sensors
Duration: 18 Months (2015)
Status: Completed

42) Funding Agency: Deanship of Scientific Research, King Khalid University, Abha
Title: Fabrication and temperature dependent electrical characterizations of n-ZnO nanorods/ p-Si substrate heterojunction diode
Duration: 12 Months (2016)
Status: Completed

43) Funding Agency: Deanship of Scientific Research, King Khalid University, Abha
Title: Ag-doped ZnO nanomaterial for enhanced ethanol gas sensing application-KKU
Duration: 12 Months (2016)
Status: Completed

44) Funding Agency: Deanship of Scientific Research, King Khalid University, Abha
Title: CuO Nanostructures for chemical sensor applications-KKU
Duration: 12 Months (2016)
Status: Completed

45) Funding Agency: Deanship of Scientific Research, King Abdulaziz University, Jeddah
Title: Heterojunction diode based on Ge-doped ZnO nanowires grown on silicon substrate: temperature dependent electrical properties
Duration: 09 Months (2016)
Status: Completed

46) Funding Agency: Promising Centre for Sensors and Electronic Devices, NU
Title: High-performance electronic devices for enhanced solar energy conversion using $Cu_2ZnSn(S, Se)_4$ and other thin-films
Research Grant: 200,000 Saudi Riyals
Duration: Completed
Status: Completed

47) Funding Agency: Deanship of Scientific Research, King Khalid University, Abha
Title: Functional Nanomaterials and their Applications
Research Grant: 200,000 Saudi Riyals
Duration: 18 Months (2016)
Status: Completed

48) Funding Agency: Deanship of Scientific Research, Najran University, Najran, Kingdom of Saudi Arabia
Title: Chemi-sensor based on CuO Nanostructures
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2019-2020)
Status: Completed

49) Funding Agency: Deanship of Scientific Research, Najran University, Najran, Kingdom of Saudi Arabia
Title: Rare-earth doped ZnO nanomaterials for enhanced chemical sensor applications
Research Grant: 100,000 Saudi Riyals
Duration: 12 Months (2019-2020)
Status: Completed

50) Funding Agency: Deanship of Scientific Research, King Khalid University, Abha, Kingdom of Saudi Arabia
Title: Advanced Functional Nanomaterials for Energy and Environmental Applications

Duration: 12 Months (2018-2019)
Research Grant: 200,000 Saudi Riyals
Duration: 12 Months (2018-2019)
Status: Completed

51) Funding Agency: Deanship of Scientific Research, King Khalid University, Abha, Kingdom of Saudi Arabia
Title: Nanomaterials for Advanced Applications
Duration: 12 Months (2018-2019)
Research Grant: 200,000 Saudi Riyals
Duration: 12 Months (2018-2019)
Status: Completed

52) Funding Agency: Ministry of Education, Kingdom of Saudi Arabia
Title: Magnetic-Assisted Nanoarchitectured Multifunctional Porous Nanoparticles for Improved Bioanalysis
Research Grant amount: 1,800,000 Saudi Riyals
Duration: Months (2020-2023)
Status: On going

And many more.

Supervisory Experience

Co-supervision for Ph. D Students

1) ***Mr. Ghulam Nabi Dar (Awarded)**
Main Supervisor: ***Dr. S. Baskoutas***
Department of Materials Science
University of Patras, Greece

2) ***Mr. M. Abaker (Awarded)**
Main Supervisor: ***Dr. S. Baskoutas***
Department of Materials Science
University of Patras, Greece

3) ***Mr. Ahmed A. Ibrahim (Awarded)**
Main Supervisor: ***Dr. S. Baskoutas***
Department of Materials Science
University of Patras, Greece

** All these students stayed in Najran and did all their experimental works under my supervision*

Supervision for research works for collaborators students

Recently, I am supervising several students for research works. I am doing this practice as a part of active research collaboration with specific research groups:

1) **Ms. Randeep Lamba (Ph. D Candidate)---Completed (March, 2017)**
   Main Supervisor: ***Dr. S.K. Mehta***
   Department of Chemistry, Panjab University, Chandigarh, India

2) **Ms. Swati Sood (Ph. D Candidate) ---Completed (2016)**
   Main Supervisor: ***Dr. S.K. Mehta***
   Department of Chemistry, Panjab University, Chandigarh, India

3) **Ms. Khushboo (Ph. D Candidate) ---Completed (2015)**
   Main Supervisor: ***Dr. S.K. Mehta***
   Department of Chemistry, Panjab University, Chandigarh, India

4) **Mr. Kulvinder Singh (Ph. D Candidate) ---Completed (2016)**
   Main Supervisor: ***Dr. S.K. Mehta***
   Department of Chemistry, Panjab University, Chandigarh, India

5) **Mr. Ramesh Kumar (Ph. D Candidate) ---Completed (2016)**
   Main Supervisor: ***Dr. M. S. Chauhan***
   Department of Chemistry, Himachal Pradesh University, Shimla, India

7) **Ms. Pankaj Sharma (Ph. D Candidate) ---Completed (2017)**
   Main Supervisor: ***Dr. M. S. Chauhan***
   Department of Chemistry, Himachal Pradesh University, Shimla, India

8) **Mr. Zhuo Chen (Ph. D Candidate) --- Completed (2018)**
   Main Supervisor: ***Dr. Yao Wang***
   Key Laboratory of Bio-Inspired Smart Interfacial Science and Technology of Ministry of Education, Beihang University, Beijing, PR China

9) **Ms. Jingwen Wu (M.S. Candidate) ---Completed (2015)**
   Main Supervisor: ***Dr. Qiang Wang***
   College of Environmental Science and Engineering, Beijing Forestry University, Beijing P. R. China

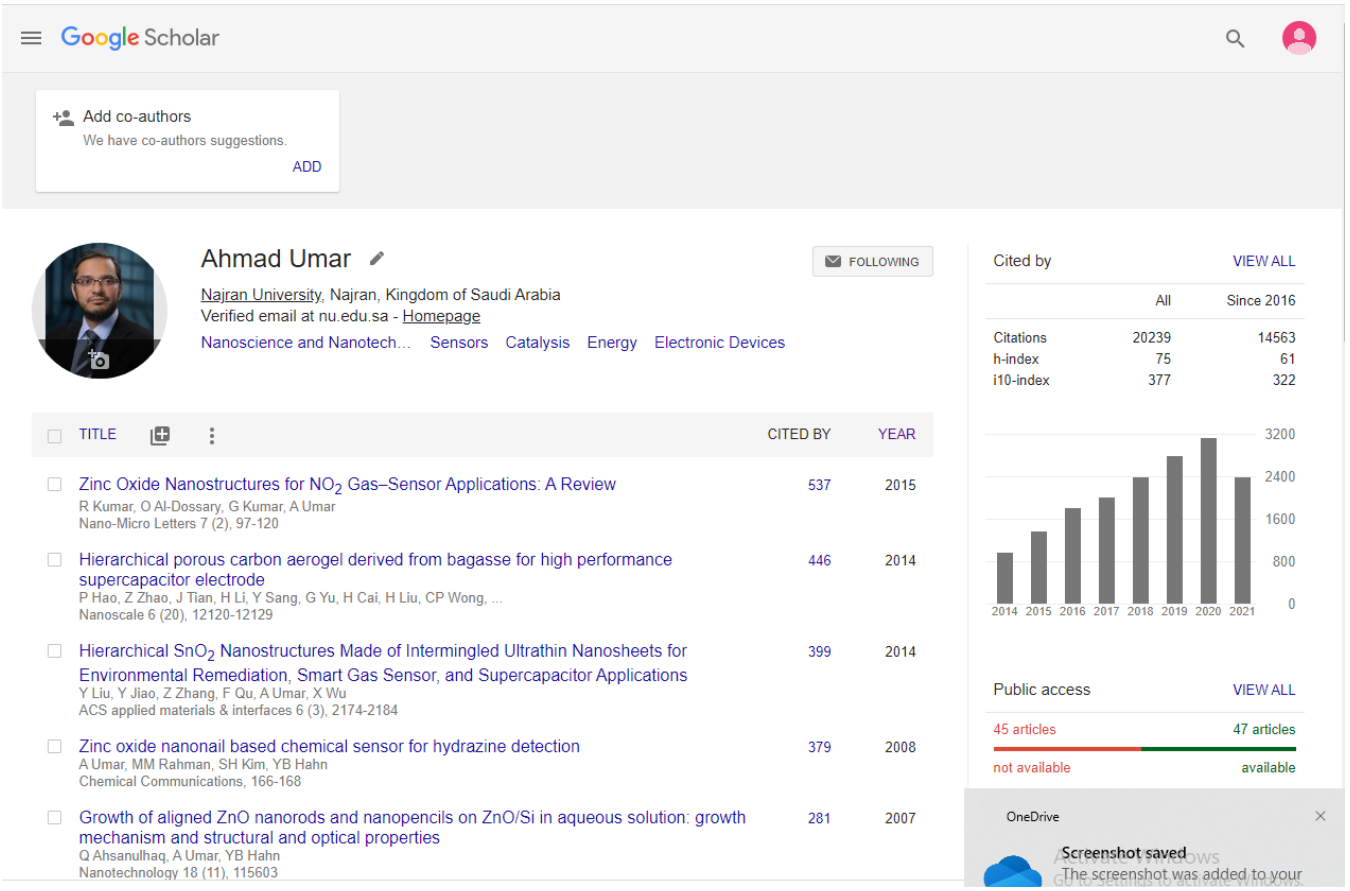
10) **Mr. Tuantuan Zhou (Ph.D Candidate) --- Completed (2017)**
    Main Supervisor: ***Dr. Qiang Wang***
    College of Environmental Science and Engineering, Beijing Forestry University, Beijing, P. R. China

REVIEWD PROPOSALS AND AWARDS

- Active reviewer for Romanian Research projects.
- Active reviewer for National Science Centre, Poland
- Active reviewer for research projects from King Abduaziz City for Science and Technology (KACST), Riyadh, Saudi Arabia
- Active reviewer for research projects from King Abdulaziz University, Jeddah, Saudi Arabia.
- Active reviewer for research projects from King Khalid University, Abha, Saudi Arabia.
- Active reviewer for research projects from Najran University, Najran, Saudi Arabia.
- Active reviewer to review the candidature of "Almarai Award" Saudi Arabia.

CITATION REPORTS

Google Scholar:
http://scholar.google.com/citations?user=_bNbebAAAAAJ&hl=en



REFERENCES

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More references can be pr