

Abdulaziz N. AlHazaa, Professor

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SUMMARY

Beside my work as a Professor in the University, currently, I serve as a vice dean for King Abdullah Institute for Nanotechnology. I am responsible for training programs, purchasing and maintaining of equipment, managing sample analysis and communicate with private and governmental agencies for mutual interests and projects. I also work for consultation and advising.

As per my research activities; I specialize in the joining technology of dissimilar materials relating the process of joining with the properties of materials. I also work in powder sintering to create innovative alloys such as high strength titanium alloys. Applications of dissimilar materials joining cover various emerging industries such as defense, chemical, biotechnology and nuclear industries. Diffusion bonding and Spark Plasma Sintering (SPS) are examples of the processes used. The research activity is extended to the areas of micro and nano joining by femtosecond laser for various applications. I also have a 14 years of industry experience in SABIC where I was heavily involved in solving and characterizations of materials problems and managing analytical lab.

EDUCATION

- **Ph.D. Materials Engineering** **Nov 2009**
Mechanical & Manufacturing Engineering dep.
University of Calgary, AB, Canada
Thesis title: Diffusion bonding of Al7075 to Ti-6Al-4V alloys
- **MA in Physics** **Aug 2003**
Physics dep. University of Texas at Austin, TX, USA
Thesis title: Ultraviolet Photoelectron Spectroscopy (UPS)
- **Bsc in Physics (1st class of honor)** **July 1997**
Physics dep. college of Science, King Saud University,
Riyadh, Saudi Arabia,

EMPLOYEMENT HISTORY

- **Professor** **Jun 2022-Present**
Physics dep. College of Science, King Saud University,
Riyadh, Saudi Arabia
- **Associate professor** **Dec 2017-May 2022**
Physics dep. College of Science, King Saud University,
Riyadh, Saudi Arabia
- **Vice Dean for technical affairs** **Jan 2015-Present**
King Abdullah Institute for Nanotechnology,
King Saud University

- **Assistant Professor** **July 2012-Nov 2017**
Physics dep. College of Science, King Saud University,
- **Lead Scientist & Section Head** **Dec 2009-June 2012**
Analytical Technology Department,
Saudi Basic Industries Corporation (SABIC)
- **Analyst** **Oct 1998-Dec 2009**
Analytical Technology Department, SABIC
- **Researcher** **July 1997-Nov 1998**
Energy Institute, King Abdulaziz City for Science & Technology

MANAGEMENT AND TECHNICAL EXPERIENCES

- Vice-dean for technical affairs** **Jan 2015- till now**
King Abdullah Institute for nanotechnology (KAIN), KSU
Responsibilities included: managing the institute Labs, arranging trainings for researchers and students on nanotechnology and instrumentation, managing the technical services given to customers inside and outside the University, working on the quality and ISO 17025 and taking care of purchasing new equipment to meet the requirements of the researchers and customers. Maintenance issues, upgrading and establishing new laboratories.
- Technical team leader** **Dec 2009-Jun 2012**
- **SABIC R&T, Riyadh, Saudi Arabia**
- Responsibilities included: Supervising the surface and catalyst characterizations labs in the Analytical Technology Department, Running X-ray Photoelectron Spectroscopy (XPS) and X-ray diffraction (XRD), contribute in research projects by offering analytical tools for characterizations and participate in managing the Analytical Technology Department, appointed as a focal point of analytical department for Catalysts Research group.

CURRENT FIELDS OF INTEREST

- Sintering of innovative alloys such as superalloys, High Entropy Alloys (HEA), biomedical and biocompatible alloys, Functionally Graded Materials (FGM).
- Diffusion bonding/Welding of dissimilar materials.
- Femtosecond laser applications in microjoining, micromachining and nanostructuring.
- Thermal and physical coatings.
- Surface Analysis of thin film and interfaces by X-ray Photoelectron Spectroscopy (XPS).

SKILLS

- **Management skills**
Ability to manage and run laboratories for research and service purposes, experiences in establishing and developing the infrastructure of Scientific laboratories.
- **Materials Characterizations**

Hand experience on X-ray Diffraction (XRD), X-ray Photoelectron Spectroscopy (XPS), Scanning Electron Microscopy (SEM), FT-Raman, FTIR and Spark Plasma Sintering (SPS)

- **Computer skills**

Comsol Multiphysics, Maple, Tecplot, AutoCad, Origin.

RESEARCH GRANTS

- 1- Deanship of research at King Saud University, "Femtosecond laser applications in surface and interface modifications", 40,000 US\$, 2018.
 - 2- National Plan for Science and Technology (NPST), "Joining of Al7075 to Ti-6Al-4V alloy by Spark Plasma Sintering", 160,000 US\$, 2020.
 - 3- Research Supporting Program (RSP), King Saud University.
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Awards

- Award as a supervisor for the best scientific achievement related to the scholarship program for the talented students in King Saud University 2018.
- SEDA Learning & Teaching and Assessing award, 2013, awarded by staff and educational development Association (SEDA), UK.
- Best safety idea, awarded by SABIC in 2003.
- First class honors-ranked 1st in the department, 5th in the University Bsc graduates 1997.

Course taught

- General Physics I - Mechanics (103 Phy) for 2nd year engineering/computer science students.
- General Physics II – Electricity & Magnetisms (104 Phy) for 2nd year engineering/computer science students.
- General physics (102) for college of science students.
- Solid State Physics (371 Phy) for 3rd year physics major students.
- Graduation project supervision (499 Phy) for Bsc students.
- Materials Science (574 Phy) for Msc students in physics department.

Selected Publications

- 1- A M Hassanien, **Abdulaziz N AlHazaa**, A A Atta, Tariq A Altalhi, Moamen S Refat, Gaber A M Mersal and Fahad N Almutairi, Morphological, optical and electrochemical properties of tin(II) 2,3-naphthalocyanine for organic electronic applications, 2023 *Phys. Scr.* 98 105942.
- 2- Ammarueda Issariyapat, Jeff Huang, Takuma Teramae, Shota Kariya, Abdollah Bahador, Patama Visutti pitukul, Junko Umeda, **Abdulaziz Alhazaa**, Katsuyoshi Kondoh, Microstructure refinement and strengthening mechanisms of additively manufactured Ti-Zr alloys prepared from pre-mixed feedstock, Additive Manufacturing, Volume 73, 2023.
- 3- Labis, J.P.; Albrithen, H.A.; Hezam, M.; Ali Shar, M.; Algarni, A.; **Alhazaa, A.N.**; El-Toni, A.M.; Alduraibi, M.A. Optimization of Pulsed Laser Ablation and Radio-Frequency

Sputtering Tandem System for Synthesis of 2D/3D Al₂O₃-ZnO Nanostructures: A Hybrid Approach to Synthesis of Nanostructures for Gas Sensing Applications. *Nanomaterials* 2023.

- 4- A.M. Hassanien, Tariq A. Altalhi, A.A. Atta, **Abdulaziz N. AlHazaa**, Mohammed Alsawat, Gaber A.M. Mersal, Abdel Majid A. Adam, Moamen S. Refat, Studying spectroscopic, cyclic voltammetry, and electrical properties of novel 4-amino antipyrine derivative for photonic applications, Journal of Molecular Structure, Volume 1272, 2023.
- 5- Nowsherwan, G.A.; Zaib, A.; Shah, A.A.; Khan, M.; Shakoor, A.; Bukhari, S.N.S.; Riaz, M.; Hussain, S.S.; Shar, M.A.; **Alhazaa, A.** Preparation and Numerical Optimization of TiO₂:CdS Thin Films in Double Perovskite Solar Cell. *Energies* 2023, 16, 900.
- 6- Al-Gawati, MA, Albrithen, H, **Alhazaa, AN**, Alodhayb, AN. Sensitivity enhancement of microelectromechanical sensors using femtosecond laser for biological and chemical applications. Surf Interface Anal. 2022; 54(10): 1060-1069.
- 7- **Alhazaa, A.**; Albrithen, H.; Hezam, M.; Ali Shar, M.; Alhwaimel, I.; Alharbi, Y.; Estournes, C. Diffusion Bonding of Al7075 to Ti-6Al-4V by Spark Plasma Sintering and Using a Copper Interlayer. *Crystals* 2022, 12, 1293.
- 8- A.M. Hassanien, Tariq A. Altalhi, Moamen S. Refat, Sonam Shakya, A.A. Atta, Mohammed Alsawat, **Abdulaziz N. Al-Hazaa**, Kareem A. Asla, Exploring microstructural, optical, electrical, and DFT/TD-DFT studies of boron subphthalocyanine chloride for renewable energy applications, Optik, Volume 263, 2022,
- 9- A. Degnah, H. F. Alnaser, El-Sayed M. Sherif, I. Alhoweml, K. Kondoh, **A. Alhazaa**, Investigation of Ti–Zr–Fe–N–H System Properties for Marine Applications, Materials Today Communications, 2022.
- 10- K Ahmad, Z Almutairi, R Almuzaiqer, **A AlHazaa**, Chunlei Wan, Processing and thermal properties of SrTiO₃/Ti₃AlC₂ ceramic nanocomposites, 2022, Pages 18739-18744, Ceramics International, 2022.
- 11- A Abdal-hay, R Staples, **A Alhazaa**, B Fournier, Fabrication of micropores on titanium implants using femtosecond laser technology: Perpendicular attachment of connective tissues as a pilot study, Optics & Laser Technology, 2022.
- 12- A Issariyapat, S Kariya, **A Alhazaa**, J Umeda, K Kondoh, Additive Manufacturing and Characterization of High Strength Ti-Zr Gyroid Scaffolds Using Pre-Mixed Ti-ZrH₂ Powders, JOM, 2021.
- 13- M Alkahtani, AA Almuqhim, H Qasem, N Alsofyani, **A. Alhazaa**, Lithium-Based Upconversion Nanoparticles for High Performance Perovskite Solar Cells - *Nanomaterials*, 2021
- 14- A Bahador, J Umeda, R Yamanoglu, A Amrin, **A Alhazaa**, K Kondoh, Ultrafine-grain formation and improved mechanical properties of novel extruded Ti-Fe-W alloys with complete solid solution of tungsten, Journal of Alloys and Compounds 875, 160031. 2021.

- 15- T Teramae, T Tanaka, M Fukuo, K Shitara, J Umeda, S Li, A **Alhazaa**, Acicular microstructure formation and strengthening behavior of Ti-4% Fe alloys by Zr addition, Journal of Alloys and Compounds 858, 158292, 2021
- 16- A **AlHazaa**, N Haneklaus, Z Almutairi, Impulse pressure-assisted diffusion bonding (IPADB): Review and outlook, Metals 11 (2), 323, 2021
- 17- A **Alhazaa**, A Assaifan, M Hezam, MA Shar, J Umeda, K Kondoh, Effect of sintering temperature on the microstructure and mechanical properties of the Ti-2.5 Zr alloy, Materials Research Express 8 (1), 016522, 2021
- 18- K Kondoh, M Fukuo, S Kariya, K Shitara, S Li, A **Alhazaa**, J Umeda, Quantitative strengthening evaluation of powder metallurgy Ti–Zr binary alloys with high strength and ductility, Journal of Alloys and Compounds 852, 156954. 2021
- 19- MA Al-Gawati, AN Alhazaa, AN Alodhayb, HA Albrithen, MA Shar, Controlling the fabrication of sub-microgrooves on a silicon surface using a femtosecond laser, Journal of King Saud University-Science 33 (1), 101251, 2021
- 20- Junko Umeda, Hiroki Ishizaka a , Shufeng Li, **Abdulaziz Alhazaa**, Katsuyoshi Kondoh, Comparison study on mechanical properties of powder metallurgy titanium materials with nitrogen solutes and TiN dispersoids, Journal of Alloys and Compounds 846 (2020) 156455.
- 21- Mahmoud Ali Al-Gawati, **Abdulaziz Alhazaa**, Hamad Albrithen, Jamal Alnofiay and Dr Abdullah Alodhayb, Effect of surface patterning using femtosecond laser on micromechanical and structural properties of micromechanical sensors, 2020, Materials Research Express.
- 22- A. **AlHazaa**, N. Haneklaus, Diffusion Bonding and Transient Liquid Phase (TLP) Bonding of Type 304 and 316 Austenitic Stainless Steel—A Review of Similar and Dissimilar Material Joints, Metals 10 (5) 613, 2020.
- 23- MA Al-Gawati, **AN AlHazaa**, AN Alodhayb, ZA Almutairi, HA Albrithen, Femtosecond laser microfabrication of micro-channels on (1 0 0) silicon surfaces, Materials Today: Proceedings, 2020.
- 24- Z Almutairi, K Ahmad, MA Al-Gawati, A **AlHazaa**, Correlation between laser spectroscopic studies and mechanical characterization of zirconia-based multiwall carbon nanotube ceramic composites, Applied Physics A 126, 1-6, 2020.
- 25- Hajjaji, S. Jemai, A. Rebhi, K. Trabelsi, M. Gaidi, **A.N. AlHazaa**, M.A. Al-Gawati, M.A. El Khakani, B. Bessais, Enhancement of photocatalytic and photoelectrochemical properties of TiO₂ nanotubes sensitized by SILAR - Deposited PbS nanoparticles, Journal of Materiomics, 2019.
- 26- Atieh, A.M.; Abedalaziz, T.J.; **AlHazaa**, A.; Weser, M.; Al-Kouz, W.G.; Sari, M.S.; Alhoweml, I. Soldering of Passive Components Using Sn Nanoparticle Reinforced Solder Paste: Influence on Microstructure and Joint Strength. *Nanomaterials* 2019, 9, 1478.
- 27- Almutairi, Z.; Ahmad, K.; Alanazi, M.; **Alhazaa**, A. Processing of Single-Walled Carbon Nanotubes with Femtosecond Laser Pulses. *Appl. Sci.* 2019, 9, 4022.
- 28- Shahzad, M.K., Zhang, Y., Raza, A., **AlHazaa**, A. Polymer Microfibers Incorporated with Silver Nanoparticles: a New Platform for Optical Sensing, Nanoscale Res Lett (2019) 14: 270.
- 29- MK Shahzad, Y Zhang, A Raza, M Ikram, K Qi, MU Khan, MJ Aslam, A **AlHazaa**, Polymer microfibers incorporated with silver nanoparticles: a new platform for optical sensing, Nanoscale research letters 14 (1), 270. 2019.

- 30- M. A. Majeed Khan, Wasi Khan, Avshish Kumar, **Abdulaziz N. Alhazaa**, Synthesis of nanosized Cu₂O decorated single-walled carbon nanotubes and their superior catalytic activity, Colloids and Surfaces A: Physicochemical and Engineering Aspects, Volume 581, 2019.
- 31- MA Majeed Khan, Rahul Siwach, Sushil Kumar, **Abdulaziz N Alhazaa**, Role of Fe doping in tuning photocatalytic and photoelectrochemical properties of TiO₂ for photodegradation of methylene blue, Optics & Laser Technology, 118, 170-178, 2019.
- 32- El-Sayed M. Sherif, **A. N. AlHazaa**, Hany S. Abdo, Manufacturing of Mg-Ti couples at different heat treatment temperatures and their corrosion behavior 4 in chloride solutions, Materials 12, 2019.
- 33- M.A. Majeed Khana, Wasi Khan, Maqusood Ahamed, **Abdulaziz N. Alhazaa**, Investigation on the structure and physical properties of Fe₃O₄/RGO nanocomposites and their photocatalytic application, Materials Science in Semiconductor Processing 99: 44–53, 2019.
- 34- **Abdulaziz AlHazaa**, Ibrahim AlHwaimel, Muhammad Ali Shar, Mahmoud Hezam, Hany S. Abdo and Hamad AlBrithen, Transient Liquid Phase bonding of Ti-6Al-4V and Mg-AZ31 alloys using Zn coatings, Materials, 12, 769, 2019.
- 35- MA Majeed Khan, Wasi Khan, M Naziruddin Khan, **Abdulaziz N Alhazaa**, Enhanced visible light-driven photocatalytic performance of Zr doped CeO₂ nanoparticles, Journal of Materials Science: Materials in Electronics, 1-10, 2019.
- 36- Shiqi Zhou, Chih-han Yang, Shih-kang Lin, **Abdulaziz N AlHazaa**, Omid Mokhtari, Xiangdong Liu, Hiroshi Nishikawa, Effects of Ti addition on the microstructure, mechanical properties and electrical resistivity of eutectic Sn58Bi alloy, Materials Science and Engineering: A, 744, 560-569, 2019.
- 37- MA Majeed Khan, Sushil Kumar, **Abdulaziz N Alhazaa**, MA Al-Gawati, Modifications in structural, morphological, optical and photocatalytic properties of ZnO: Mn nanoparticles by sol-gel protocol, Materials Science in Semiconductor Processing, 67, 134-141, 2018.
- 38- Rayan Khalid, **Abdulaziz N Alhazaa**, MA Majeed Khan, Synthesis, characterization and properties of Mn-doped ZnO nanoparticles, Applied Physics A, 124-8, pp: 536, 2018.
- 39- M.A. Majeed Khan, Wasi Khan, Avshish Kumar, **Abdulaziz N. Alhazaa**, Plasma enhanced chemical vapour deposition growth and physical properties of single-walled carbon nanotubes, materials letters, 2018.
- 40- M.A.Majeed Khan, Sushil Kumar, Tansir Ahamad, **Abdulaziz N. Alhazaa**, Enhancement of photocatalytic and electrochemical properties of hydrothermally synthesized WO₃ nanoparticles via Ag loading, Journal of Alloys and Compounds 743, 2018, 485-493.
- 41- **A. AlHazaa**, M. Shar, A. Atieh and H. Nishikawa, Transient Liquid Phase bonding of magnesium alloy AZ31 using Cu coatings and Cu coatings with Sn interlayers, Metals, 8, 60, 2018.
- 42- Anas M. Atieh , Nathir A. Rawashdeh, **Abdulaziz N. AlHazaa**, Evaluation of Surface Roughness by Image Processing of a Shot-Peened, TIG-Welded Aluminum 6061-T6 Alloy: An Experimental Case Study,. *Materials* 11(5), 771, 2018.
- 43- M. Gaidi , K. Trabelsi, A. Hajjaji , M. L. Chourou, **A.N. AlHazaa**, B. Bessais and M. A. El Khakani, optimizing the photochemical conversion of UV-Vis light of silver-nanoparticles decorated TiO₂ nanotubes based photoanodes, Nanotechnology, 2017.
- 44- M.A. Majeed Khan, Wasi Khan, Maqusood Ahamed, **Abdulaziz AlHazaa**, Microstructural properties and enhancement in photocatalytic performance of Zn doped CeO₂ nanocrystals, Scientific Reports, 2017.

- 45- Abdelaleem Al-Obaisi, Ehab Adel El-Danaf, Adham Ezzat Ragab, Mahmoud S Soliman, and **Abdulaziz AlHazaa**, Statistical Model for the Mechanical Properties of Al-Cu-Mg-Ag Alloys at High Temperatures, Advances in Materials Science & Engineering, 2017.
- 46- Anas M. Atieh, Rula M. Allaf, **Abdulaziz AlHazaa**, Mahmoud Barghash, Hasan Mubaydin, Effect of pre-and post-weld shot peening on the mechanical & tribological properties of TIG welded Al 6066-T6 alloy, Transactions of the Canadian Society for Mechanical Engineering, Vol. 41, No. 1, 2017.
- 47- **A. N. AlHazaa**, Effect of bonding temperature on the microstructure and strength of the joint between magnesium AZ31 and Ti-6Al-4V alloys using copper coatings and tin interlayers, Key Engineering Materials, 2017.
- 48- **A. N. AlHazaa**, S. H. AlGharbi, H. Nishikawa, Effect of bonding temperature on the joining of Ti-6Al-4V alloy using Cu coatings and Sn interlayers, Journal of Materials Engineering & Performance, 2016.
- 49- Tansir Ahamad, M. A. Majeed Khan, Sushil Kumar, Maqusood Ahamed, Mohammed Shahabuddin, **Abdulaziz N. Alhazaa**, CdS quantum dots: growth, microstructural, optical and electrical characteristics, Appl. Phys. B (2016) 122:179.
- 50- Hiroshi Nishikawa, **Abdulaziz N. AlHazaa**, Siliang HE, Addulhakim A. Almajed and Mahmoud S. Soliman, Interfacial reaction between Sn-Ag-Cu-Mg solder and ENIG substrate, Key Engineering Materials, Vol 701, 216-219, 2016.
- 51- Shahid Mahmood Ramay, Asif Mahmood, Shahid Atiq, **Abdulaziz AlHazaa**, Study of divalent elements (Mg, Sr and Ba)-doped LaMnO₃ nano-manganites. International Journal of modern physics B 30(6), 2016.
- 52- **A. N. AlHazaa**, Khalil A. Khalil and Muhammad A. Shar, Transient Liquid Phase bonding of Magnesium alloys AZ31 using nickel coatings and high frequency induction heat sintering, Journal of King Saud University (Science), Volume 28, Issue 2, 152–159, 2016.
- 53- Asif Mahmood, Shahid Mahmood Ramay, Yousef S. Al-Zaghayer, **Abdulaziz N. AlHazaa**, Waheed A. Al Masary & Shahid Atiq, Au doping effect on the electrical and magnetic properties of Fe₃O₄ nanoparticles. Modern Physics Letters B 29(33), 2015.
- 54- Asif Mahmood, Shahid Mahmood Ramay, Yousef S. Al-Zaghayer, **Abdulaziz N. AlHazaa**, Waheed A. Al Masary & Shahid Atiq, Synthesis and investigation of photocatalytic properties of Au/Fe₃O₄ nanocomposite materials for degradation of methylene blue, Desalination and Water Treatment, 1-7, Oct. 2015.
- 55- Bouraoui Ilahi, Manel Souaf, Mourad Baira, Jawaher Alrashdi, Larbi Sfaxi, **Abdulaziz AlHazaa**, and Hassen Maaref, Evolution of InAs/GaAs QDs Size with the Growth Rate: A Numerical Investigation, Journal of Nanomaterials, Volume 2015 (2015), Article ID 847018, 6 pages.
- 56- **A. N. AlHazaa**, El-Sayed M. Sherif, Hany S. Abdo, Galvanic Corrosion in 3.5 wt. % NaCl Solutions of Magnesium alloy AZ31 Coupled with Ni after Different Bonding Periods of Time, Int. J. Electrochem. Sci, 10 (2015) 5420 – 5433.
- 57- **A. N. AlHazaa**, El-Sayed M. Sherif, Corrosion Behavior of Al7075, Ti-6Al-4V, and Sn-3.6Ag-1Cu Alloys in 3.0 wt.% Sodium Chloride Solutions Using Potentiodynamic Polarization Measurements, Int. J. Electrochem. Sci., 10 (2015) 4193 - 4207.
- 58- **A. N. AlHazaa** and T. I. Khan, Diffusion bonding of Al7075 alloy to Ti-6Al-4V alloy using Cu coatings and Sn-3.6Ag-1Cu interlayers, Journal of Alloys and Compounds, 2010.
- 59- **A. N. AlHazaa**, T. I. Khan and I. Alhaq, TLP bonding of Al7075 alloy to Ti-6Al-4V alloy using copper interlayers, Journal of Materials Characterizations, 2010.

- 1- Kavian O Cooke, **Abdulaziz Alhazaa**, Anas M Atieh, Dissimilar Welding and Joining of Magnesium Alloys: Principles and Application, Book: Magnesium-The Wonder Element for Engineering/Biomedical Applications, IntechOpen, 2019.

CONFERENCE PAPERS

- 1- Anas M. Atieh, **Abdulaziz N. AlHazaa**, Rohit Upadhyaya, Comparison of WC-10Co-4Cr coatings properties produced by HVOF and HVOLF processes for application in petrochemical industry, Proceedings of The Canadian Society for Mechanical Engineering International Congress 2018 CSME International Congress 2018 May 27-30, 2018, Toronto, On, Canada.
- 2- **A. N. AlHazaa**, Effect of bonding temperature on the microstructure and strength of the joint between magnesium AZ31 and Ti-6Al-4V alloys using copper coatings and tin interlayers, ICAMR, <http://www.icamr.org/Hong%20Kong%20Schedule.pdf>, 2017.
- 3- Anas M. Atieh, **Abdulaziz Alhazaa**, Atta G. Attaelmanan, The Effect of Quenching Medium on The Microstructure and Mechanical Behaviour of Inconel 625 Welded Alloy, 26th Canadian Congress of Applied Mechanics (CANCAM), Victoria, BC, Canada, 29th May 2017.
- 4- Anas M. Atieh, Rula M. Allaf, Mohammad Ebrahim Nawaiseh, **Abdulaziz AlHazaa**, Mahmoud Barghash, Effect of Shot Peening on the Mechanical Properties & Weldability of TIG Welded Aluminum 6061-T6 Alloy, Conference: CSME International Congress, At Kelowna, BC, Canada, Jun 2016.
- 5- **A. N. AlHazaa** and T. I. Khan, Diffusion bonding of Al7075 to Ti-6Al-4V using eutectic interlayers, conference of Metallurgists, <http://toc.proceedings.com/08452webtoc.pdf> ,Winnipeg, Canada, 2008

CONFERENCES PARTICIPATIONS

- 1- Fourth International Conference & Exhibition on Chemistry in Industry, Bahrain, October 30 to November 1, 2000, (**Oral presentation**).
- 2- Conference of Metallurgists, Winnipeg, MB, Canada, 24-27 Aug. 2008, (**Oral presentation**).
- 3- SIWAN 5th Szeged International Workshop on Advances in Nanoscience (SIWAN5), Szeged, Hungary, 24-27 Oct. 2012, (**Attendance**).
- 4- Ecomas Thematic Conference on Smart Structures and Materials, Turin, Italy, 24-26 Jun 2013, (**Oral presentation**).
- 5- International symposium for welding and joining, Osaka, Japan, 6-8 Nov. 2013, (**Attendance**).
- 6- Third International Conference on Materials Science & Engineering, San Antonio, TX, USA, 6-8 Oct. 2014, (**Attendance**).
- 7- European Congress and Exhibition on Advanced Materials & Processes (Euromat) 2015, Warsaw, Poland, 20-24 Sep. 2015, (**Attendance**).

- 8- Joining Technologies and Materials Science, International Symposium in Qatar, organized by Osaka University, expand collaboration network in Middle East, 7 Dec. 2015, **(Invited speaker)**.
- 9- 7th International Conference on Advanced Materials Research, Hong Kong, Jan 20-22, 2017, **(Oral Presentation)**.
- 10- The First Canada –UAE-Japan work shop on Functional Materials: Synthesis, characterizations and Applications, University of Sharjah, January 29-31, 2017. **(Invited Speaker)**.
- 11- 2020 The 10th International Conference on Key Engineering Materials (ICKEM 2020), Madrid, March 25th-28th, **Speaker and session Chair**.
- 12- 2023 EMRS-Fall meeting, Warsaw Poland, **(Oral presentation)**.

SUPERVISED GRADUATE STUDENTS

- Reem Amutairi, PhD thesis, Development of High Entropy Alloy for high temperature applications, ongoing, (Principle supervisor).
- Fatima Batarfi, Msc thesis, Synthesis and Characterization of Cesium Lead Bromide Sintered Targets, ongoing, (Principal supervisor).
- Mahmoud AlGwati, PhD thesis, surface modifications of micromechanical sensors by femtosecond laser to enhance detection of hazardous trace materials, 2022. (Principal supervisor).
- Ibrahim Al-Hwaimel, Msc Thesis, the effect of Zn coatings on the microstructure of the joint formed between Mg alloy and Ti alloy, 2019. (Principal supervisor).
- Sultan AlGharbi, Msc thesis, Investigation of the Atomic diffusion and intermetallic formation IMC of Sn-Cu alloy coatings on Ti-6Al-4V alloy substrate, completed, 2017. (Principal supervisor).
- Ghazwa AlSubaie, Msc thesis, Interaction of Melanin with Ionizing Radiations, completed 2015. (co-supervisor).
- Amal Al-Dhubaib, Msc thesis, Computational investigation of InAs InP quantum dots emission energy tunability by in situ height control by, completed 2015, (co-supervisor).

PROFESSIONAL SOCIAL NETWORKS

Google scholars: <https://scholar.google.com/citations?user=9ZjrLdIAAAJ&hl=en&oi=ao>

Researchgate: <https://www.researchgate.net/profile/Abdulaziz-Alhazaa>

Linkedin: <https://www.linkedin.com/in/abdulaziz-alhazaa-2a566752/>

SERVICES

- Member of comprehensive exam committee for PhD students, Physics & Astronomy dep. College of Science, King Saud University, 2019.
- Member of "Scholarships Affairs" at Physics & Astronomy department, College of Science, King Saud University from Jun 2013 to present.
- The head of the quality committee to achieve ISO17025 for KAIN laboratories, Sep '2017-present.
- The head of the physical standardization Committee at Saudi Standards, Metrology & Quality Organization (SASO), Jan 2014-Jun 2017

- Member of the mechanical standardization Committee at Saudi Standards, Metrology & Quality Organization (SASO), Oct. 2019-present.
- Member of National Center for Assessments (Qiyas) at the Ministry of Education, March 2014-Present.
- Member of the National Center for Nondestructive Tests (NCNDT) at King Abdulaziz City for Science & Technology (KACST), Jan 2015-Dec 2016.
- Member in the scientific committee at the 3rd Saudi International Conference in Advanced Materials Technology, 2015.
- The head of graduates and workforce committee at the Physics & Astronomy department from Sep 2017 to present.
- The head of condensed matter group at the physics & astronomy department from Jan 2013 to Dec 2013.
- Member of a Chair of tribology, surface and interfacial sciences, King Saud University.

ATTENDED TRAININGS AND WORKSHOPS

Technical:

- Tribology: Friction, Wear, and Lubrication, MIT, USA, 2018.
- Fundamental of x-ray diffraction, ICDD x-ray clinics, USA, 2011.
- Polymer & composite analysis & operations, international center for training and development, UAE, 2004.
- Communication skills, Qudraat Establishment, Riyadh, 2004.
- Innovation & Creativity, Meric Training & Consulting, Riyadh, 2004.
- Basic First Aid and Heartsaver Course, Saudi Heart Association, Riyadh, 2001.
- Meeting and group discussions, Meric Training & Consulting, Riyadh, 2000.
- X-ray diffractometry, Philips Analytical, Netherlands, 2000.
- The Quality Advantage, SABIC, Riyadh, 2000.
- Introduction to Statistics, SABIC, Riyadh, 1999.
- Solar Radiation Resources Assessment, NREL, Riyadh, 1997.

Teaching:

New Faculty Orientation and Preparation Program, 2013, organized by the Deanship of Skills development at King Saud University. The topics covered in this 36 hours program were:

- Course design and constructions (9 hours)
- Effective Teaching Skills for Higher Education (12 hours)
- Learning Outcomes Assessments (9 hours)
- Micro Teaching (6 hours)