Publications in International (ISI Listed) Journals


5. Y.S.Wudil, **M.A. Gondal**, S.G. Rao S. Kunwar (2020) Thermal conductivity of PLD-grown thermoelectric Bi2Te2.7Se0.3 films using temperature-dependent Raman spectroscopy technique, Ceramics International 1-6 (2020).


11. U Baig, **M.A. Gondal** et al, Facile Synthesis, Characterization of Nano-Tungsten Trioxide Decorated with Silver Nanoparticles and Their Antibacterial Activity Against Water-borne Gram-negative Pathogens, Applied Nanoscience (accepted and on line) DOI: 10.1007/s13204-019-01186-z


22. I. Rehan, M.A. Gondal, K. Rehan, S. Sultana, M. A. Dastageer, F.F. Al-Adel (2019) LIBS for the detection of lead in ready to use henna paste and nutrients in fresh henna leaves and cultivated soils, Talanta, 199,293-211.


28. A.A.I.Khalil, R Al-Tuwirqi, M.A. Gondal, N Al-Suliman - Factors affecting improvement of fluorescence intensity of quartet and doublet state of NO diatomic molecule excited by glow discharge, Chinese Physics B, 27, (8) 085202: 1-8, 2018


128. **Kai Shen, M. A. Gondal** , A. A. Al-Saadi , Li Liye, Xiaofeng Chang ,Qingyu Xu (2015), Visible light induced photodegradation of Rhodamine dyes over BiOCl and the vital importance of frontier orbital energy of the dye molecules in the reaction kinetics, Research on Chemical Intermediates, 41, 2753-2766.


145. A. A. Naqvi, Faris A. Al-Matouq, F. Z. Khiai, Khateeb-ur-Rehman, M. A. Gondal, A. A. Isab (2013), Nitrogen Detection in Bulk Samples Using a D-D Reaction-Based Portable Neutron Generator, Journal of Spectroscopy, Volume 2013, Article ID 486192, 7 pages


173. M. H. Shwehdi, M. A. Gondal, Detecting impurities that lead to electrical cables outages using laser sensing, AR - CEIDP, art. no. 5724100.


215. A. A. I. Khalil, **M. A. Gondal** (2009), Development of silver ion source using nanosecond pulses of Nd:YAG laser at different wavelengths, Nuclear Instruments and Methods B 267, 3356-3363.


**Conference Publications/presentations**


328. **M. A. Gondal** *(invited talk)*, Disinfection of Contaminated Water by Laser Induced Photo-catalysis Process using Semiconductor Catalysts, National Scientific Conference on “The use of Nanotechnology in Water Treatment” King AbdulAziz City For Science and Technology (KACST), Riyadh (17th April, 2016)


369. **M. A. Gondal**, Y.W. Maganda, M.A. Dastageer, F. F. Al-Adel, A. Naqvi


390. Shwehdi, M.H. Gondal, M.A (2010), Detecting impurities that lead to electrical cables outages using laser sensing, Annual Report - Conference on Electrical Insulation and Dielectric Phenomena, CEIDP 2010, Article number 5724100

391. M.N. Siddiqui, M.A. Gondal (2011), Use of Laser Induced Breakdown Spectroscopy for determining trace metals in plastic waste, proceedings Faraday Discussions:150, Frontiers in Spectroscopy, 6-8 April, Bassel, Switzerland


410. M. A. Randhawa, **M. A. Gondal**, A. Aziz Bagabas Activity of Nano-Palladium implanted on Zinc Oxide against Invasive Enteric pathogens, Fourth Saudi Science Conference, 21-24 March 2010, Taybah University, Madinah, KSA.


418. **M. A. Gondal**, K. Hayat, M. N. Sayeed (2009), Laser induced Photo-catalytic degradation of organic contaminants from water using semiconductor metal oxides, paper 3C-O646 6th world Congress on Oxidation Catalysis, 5-10th July, 2009 Lille, France.


459. Z. H Yamani, **M. A. Gondal**, E. Heghazi and M.H. Masoudi (2003), Industry oriented research at LRS at KFUPM, First Saudi Physical Society Conference, Abhah, Saudi-Arabia.


477. M. A. Khan, R. J. Dewhurst, **M. A. Gondal**, S. A. Alkabi, Y.N. Al-nassar and A. Baig (2001), Ultrasonic inspection of materials defects using laser,


**Leadership in Research Projects (Completed or under Progress)**

5. **Distinguished Professorship Award DUP18101 (sep 2019- sep 2022).**
7. **Principal Investigator, NSTP (National Science and Technology Plan) Project # 15-ADV4907-04** Synthesis of Crystalline Semiconductor Nanostructures using the Pulsed Laser Ablation Technique (march 2016 – april 2018). **Principal Investigator, Internal project # IN161001**
9. **Principal Investigator, Internal project # IN161001, Distinguished Professorship Award** (September 2010- Sept 2019).
10. **Principal Investigator**, Internal project # Rg1421-1 & Rg1421-2, Laser Induced Breakdown Spectrometer for Trace Elemental Analysis of Food and Cosmetic Products (September 2015- November 2018).


13. **Co-Investigator**, Internal project # Rg 1405-1 & Rg 1405-2, Pulsed laser deposited Bismuth telluride Thin films Study for Thermoelectric Applications (March 2015-december 2017).

14. **Principal Investigator**, # MIT-11109, 11110(MIT project number: 6926440/6926441), Remediation of Water Produced in Resource Extraction (2012- Aug 2014) joint with MIT.

15. **Principal Investigator**, # MIT-13103,13104 (MIT project number: 6926440/6926441) (Remediation of Water Produced in Resource Extraction (Sep 2014 - Aug 2017) joint with MIT.

16. **Principal Investigator** (TIC -KFUPM) project # CCS-16 funded by KACST Carbon Dioxide Conversion Into Value-Added Hydrocarbons Over Highly Active and Economic Catalysts In Photochemical and/or Electrochemical Reduction Process Enhanced By Photo-Catalysis (December 2014-March 2018).


18. **Principal Investigator Internal project** # Rg1311-1 & Rg1311-2, Synthesis of nanoalloys and nanocomposites using pulsed laser ablation in liquids (May 2013- Sep 2016).

19. **Distinguished professorship award** IN161001 (Sep 2010- Sep 2019).

20. **Co-Investigator Internal project** # Rg 1221-1 & Rg 1221-2, Effects of Pulsed Nd:YAG Laser fluence on the Structural properties and Valence States of Transition Metal Ions in Phosphate Glasses (Sep2012-december 2014).

21. **Co-Investigator Internal project** # Rg1201-1 & Rg1201-2, Comparison of Detection Sensitivities of Prompt Gamma-Ray Neutron Activation Analysis and Laser Induced Breakdown Spectroscopy Techniques for Analysis of Toxic Elements Ag, Br, Cd, Cr, Cl, Gd, Hg, Ni and V in Liquid and Solid Samples (Nov,2011-June 2015).

22. **Co-Investigator** NSTP (National Science and Technology Plan) Project #10—NAN1387, Development of highly efficient visible-light-driven mesoporous nanostructured materials for photocatalytic applications (Dec 2012-Feb2014).


24. **Co-Investigator**, NSTP (National Science and Technology Plan) project # No. 10-wat1240-10 , Synthesis of Nano Structured Composites and Their Application in Elimination of Methyl Tertiary Butyl Ether (MTBE) From Water (Sept 2012-Jan 2014).


26. **Principal Investigator**, Internal project # Rg1011-1 & Rg1011-2, Photo-catalytic conversion of carbon dioxide into methanol using nanocatalysts (Oct 2010- March 2013).

27. **Principal Investigator**, SABIC# 090023 Pulsed Laser Ablation for Synthesis of Nanostructured ZnO and ZnO2 (March 2009-september 2010, completed).


31. **Principal investigator**, Distinguished professorship award, IN100038, (2010-till date) and IN131001.

32. **Co-Investigator**, IN# 101022 Nanocomposite materials co-polymers organo-modified clay (May 2011-- May 2014).

33. **Co-Investigator** NSTP (National Science and Technology Plan) Project # 08-ADV-704, Advanced bioinert ceramic filter materials with guided macro-micro-nano porous structure manufactured using microwave and laser sintering process.
34. **Co-Investigator, KACST # DRP-4-25** Development of Technologies For Deep Desulfurization of Fuel Oils (May 2010, June 2013)


36. **Principal Investigator, Core Center of Corrosion #CR-1-2010** Development of Laser Induced Breakdown Spectrometer for the Determination of Chloride and Sulfate Concentration in Concrete Structures for Assessment of Reinforcement Corrosion (January 2010- december 2012).

37. **Co-Investigator, FT# 100034** Laser nanomaterials Phenol Detection (may 2011- 2012- January 2012).


39. **Co-Investigator, Internal project # IN080427** Identifying the Causes of Saudi Arabia Low Voltage Cables Outages by Applying Explicit Measures and Laser Induced Breakdown Spectroscopy (LIBS) (January 2009-Novemebr 2010).


42. **Co-Investigator, internal project# In-080401** (2008-2011). Development of LIBS spectrometer for various applications (2008-2011).

43. **Principal Investigator, Sabic project # SABIC - 2005/11** Laser Sensor For Detection Of Ozone (started on Oct 2005, ended May 2007).

44. **Principal Investigator, Sabic project # SABIC - 2002/01** Photocatalytic Conversion Of Methane into Methanol Using Laser, (duration 18 working months, started on 1.2..2003, ended date: 3.11.2004 ).

45. **Principal Investigator, Sabic project # 2000/ft-14** In situ detection of SF6 leaks in power systems using laser, (duration 18 months, started on 1.12.2000, completed on 31.12.2002).


48. **Principal Investigator, internal project RI PN# 12063** Development of laser based remote sensors for environmental studies, (duration 24 months, start date on 1.9.2002, ending date 31.10.2005, project on hold since April 2004 due to shortage of manpower).

49. **Principal Investigator, Client Funded Project# SQ 2419** Monitoring of Volatile Organic Compounds Pollutants (Total Organic Carbon, Benzene, Styrene and Naphthalene) using electromagnetic radiation absorption and photoacoustic detection technique at Saudi Petrochemical Complex Yanbu (YANPET). (three months duration, project completed successfully in 1996).

50. **Principal Investigator, Client Funded Project# SQ 2489** Monitoring of air pollutants (Total Organic Carbon, NO2, NO, SO2 CO2, CO) in and around the premises of Bitumat plant at Dammam”. (One-month duration, project completed successfully in 1997).

51. **Principal Investigator, Client Funded Project# SQ 2378** Calibration of a Radiometer Model RX 1000 using UV radiations generated from frequency doubled YAG pumped dye laser for Arabian Metal Company, Dammam (project completed successfully in 1996).

52. **Co-Investigator, RI Project #12043. (Five years duration, 1992-1997).** Investigation of Laser Excited Alkaline Earth Metal Atoms.

53. **Principal Investigator, CAPS Project (1995- to 2005** Development of an Environmental Research Facility for the atmospheric pollution monitoring, leak detection across pipelines and for the trace gas analysis based on the photoacoustic (PA) techniques using lasers.

54. **Principal Investigator, CAPS Project (1999-to 2005).** Development of LIDAR (light detection and ranging) system for remote sensing of environment and leak detection across the oil/gas pipelines.
Invited Talks /Seminars/Presentations


9. Recent trends in waste water treatment using nano materials and advanced oxidation process with laser and solar radiations, Mechanical Engineering Department, MIT Cambridge USA (June 14, 2013).

10. Fabrication of hydrophobic surfaces (films and textures) using pressurized spray gun and their novel applications, Physics Department, KFUPM (24th February, 2013).


12. **Invited Speaker**, Synthesis of nano-engineered materials and fabrication of hydrophobic and hydrophilic surfaces (textures) for waste water treatment, Mechanical Engineering Department, KFUPM (13th November, 2012).


14. **Invited Speaker**, Laser Induced Photo-Catalysis and its Application in Waste Water Treatment ,Center of catalysis, King Abdullah University of Science an Technology (KAUST) Saudi Arabia (7th June 2011).


16. **Invited Speaker**, Treatment of Malignant Tumors using Novel Nano Engineered Photocatalysts and Laser Radiations, Research Institute, King Faisal Specialist Hospital, Riyadh (Nov 9, 2011).

17. **Invited Speaker**, Laser induced photocatalysis for production high value hydrocarbons and hydrogen, National Center for Physics (NCP), Islamabad Pakistan (July 25, 2011).

18. **Invited Speaker**, Advanced technolgies for Waste water treatment, Institute of Environmental Sciences and Engineering (IESE), National University of Science and Technology(NUST), Islamabad (July 27, 2011).


22. **Keynote Speaker**, “36th International Nathiagali Summer College (INSC), on **Photovoltaics**” (4-8th July, 2011) Pakistan.


24. **Key Note Speaker**, International Conference on Chemistry in Industry (CHEMINDIX 2010), Manama, Bahrain (October 25-27, 2010).


26. Laser Research Activities at KFUPM, Physics Department, KFUPM (27th April, 2010), Dhahran.

27. Laser Induced Photocatalysis for Removal of Sulphate Reducing Bacteria, Saudi Aramco (8th June, 2010).

28. Laser Induced Breakdown Spectroscopy and its applications, Laser Group, Institute of Chemical Process Fundamental, Czech Academy of Sciences, Prague, Czech Republic (22.11.2010).

29. Synthesis of nanostructured metal oxides like ZnO using pulsed laser ablation in liquids Laser Group, Institute of Chemical Process Fundamental, Czech Academy of Sciences, Prague, Czech Republic (23.11.2010).


34. **Key Note Speaker**, 9th Symposium on analytical and environmental Chemistry, Baragali, Pakistan (July 24-26, 2006).


36. How to Improve Research and Development Program at University Level, Physics Department, March 16, 2008.

37. Laser based analytical techniques for various applications, Chemistry Department, ARARAQUARA, SP, Brazil, Oct 17, 2007.


40. Laser induced Breakdown Spectroscopy and its Applications in Environment, Geology, Petroleum, Steel and Mining industries, Phys Deptt, King Abdul Aziz University Jeddah, 29.3.2006.

41. Effect of industrial pollution on environment and advanced optical techniques, Earth Science Department, KFUPM, 20 December, 2005.

42. Lecture Series on pollution (solid, liquid and gas) Monitoring using lasers, Institute of Environmental Sciences and Engineering, National University of Sciences and Technology, Rawalpindi, Pakistan, 7-11 November, 2005.

43. Laser application in environmental Sciences, Physics department, KFUPM, 24. September, 2005

44. LIDAR Monitoring Of Aerosols For Prediction Of Boundary Layer Heights, Phys Department, King Saud University, Riyadh, 7th June 2005.


46. Global warming and its effects on humans, forest and climate, American Chemical Society Meeting, Gulf Meridian, Alkhobar, September 2004


49. Laser production of high value hydrocarbons and high value organic products from petrol residue, Saudi Aramco, March 2003.

50. **Methane Cracking for the production of higher hydrocarbons on 28 April 2003 at the LRS, CAPS, RI, KFUPM**.
51. Detection of SF6 leaks in power systems using laser on 12 May 2003 at the LRS, CAPS, KFUPM.
52. Photoacoustic Spectroscopy for Trace Gas Analysis and Gas Leak Detection, Physics Department, Free University Berlin, Germany, 17.7.2002.
54. Laser remote sensing and its applications in environment, agriculture and metrology, Air and Waste Management Association USA (Saudi-Section) Dhahran International Hotel, 23.1.2001.
55. Laser sensors applications in agriculture, oil and industrial pollution Joint seminar R.I and Mechanical Engineering Department, KFUPM, 3.10 2000.
56. Light detection and ranging (LIDAR) system, Institute of Applied Physics, University of Bonn, Germany, 19.7.2000.
57. Photoacoustic sensor for insitu detection of leaks in power systems, to the technical experts from SCECO Central, Riyadh and SCECO West, Jeddah on 17.10 2000.
60. Laser Remote Sensing and its Applications, Joint seminar R.I and Physics Department, KFUPM, 4.5 1997
61. Laser Applications in Medicine, King Fahd Teaching Hospital, Alkhobar, Saudi-Arabia. 25. 6. 96.
63. Multi-step Excitation of Autonizing States and Role of Collisions in Ca-vapor", Center for Laser and Applications, Macquaire University, Sydney, Australia, 21. 2. 96
64. Collisional energy transfer of laser excited metastable Ca atoms and excitation of ionic states of calcium, Physics Department, University of Kaiserslautern, Germany (8.8.1995).
65. Large scale collisional energy transfer in optically prepared atomic states of calcium, Institute of Applied Physics, University of Bonn, Germany (28.7.1995).
68. Environmental applications of lasers", Division-II, R.I. Seminar was presented to experts from National Environmental Preservations Co. (BeeA'h). (31.10.1994).
70. Laser remote sensing of leaks in gas pipelines, Division-II, R.I., KFUPM (30.11.1993).
72. Diode laser and its applications", Division-II (Proposal Seminar at Managerial Level) (February 1993).
73. Single photon excitation studies of new diffuse bands in Na2 and Li2 dimers using 351nm (XeF) and 337 nm (N2) excimer laser, International Center for Theoretical Physics( ICTP), Trieste, Italy (18.6.90).

Short Courses/workshops Offered

- Practical Considerations for Insulation and Cables Materials and their Characterization Using Laser induced breakdown spectroscopy (LIBS) Techniques, KFUPM (July, 5- 9, 2008).
- Lasers and their applications held at LRS (2001), CAPS, KFUPM.
- The course covered the basic principles of lasers, types of lasers, operation & routine maintenance of lasers, laser safety, as well as many applications in engineering, industry, environment, medicine and agriculture (November 27 – 01st December 1999)
- Recent advancements in air pollution monitoring & control held at Institute of Environmental Sciences and Engineering, National University of Sciences and Technology (NUST), Rawalpindi, Pakistan. The course covered the important issues concerning global warming, ozone depletion, acid rain, photochemical smog, forest decline and state of the art advanced techniques for air pollution monitoring such as LIDAR, Photoacoustic
spectroscopy, Laser Induced Breakdown Spectroscopy (LIBS) and their applications as well as the latest techniques for control of air pollution at industrial complexes. (September 8-9, 2003 (delivered five lectures).

- Workshop on environmental issues and air monitoring techniques, Institute of Environmental Sciences and Engineering, National University of Sciences and Technology (NUST), Rawalpindi, Pakistan (January 7-9, 2003).
- Workshop on awareness of environmental (water, air) problems in Pakistan, Global environmental problems, greenhouse effect, ozone depletion and acid rain formation, toxic air pollutants and their safe permissible limits and laser based techniques developed at KFUPM (Total six lectures + videos), National Engineering and Science Commission (NESCOM) Islamabad, Pakistan (23.8.2006).

**Postdoc Supervision**

- Synthesis of nano structured materials and their applications in waste water treatment using laser induced photocatalysis process, Dr. Qamar (2008-2010).
- CO₂ conversion into methanol using laser induced photocatalysis, Dr. K. Hayat (2010-2011).
- Remediation of Water Produced in Resource Extraction, Dr. U. Baig (2014-2016)
- Synthesis of nano engineered materials for various applications in the filed of renewable energy, oil water separation, wetting and non wetting surfaces, Dr. Talal Farhan Qahtan (2017-2020)
- Development of Third Generation Solar Cells, Dr. M. Younas (2020 - )

**Ph.D. Thesis Supervision**

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<tr>
<th>S. No.</th>
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<th>End Date</th>
<th>Role</th>
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<td>1.</td>
<td>Reem Al-Dakheel</td>
<td>Development of Laser Induced Breakdown spectrometer for Analysis of Human Tissues for Cancer Diagnostics</td>
<td>2018</td>
<td>In progress</td>
<td>Advisor</td>
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<tr>
<td>1.</td>
<td>Talal F Qahtan Physics Dept, KFUPM</td>
<td>Synthesis of wetting and non wetting surfaces for oil water separation</td>
<td>2015</td>
<td>Completed Jan 2018</td>
<td>Advisor</td>
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<tr>
<td>2.</td>
<td>Rasha Abdurabu S. AbuMusa Physics Dept, KSU Riyadh</td>
<td>Synthesis and applications of Nanocomposites Photocatalysts for treatment of Cancer Cell lines under Light irradiation</td>
<td>2016</td>
<td>Completed May 2018</td>
<td>Co-Advisor</td>
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<td>4.</td>
<td>Wafa Musa Al-Mujamammi</td>
<td>Physics Dept, KSU Riyadh</td>
<td>Excited state dynamics of some conjugated polymer lasers</td>
<td>2016</td>
<td>Completed December 2017</td>
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<td>5.</td>
<td>Muhammad Younas</td>
<td>Physics Dept, KFUPM</td>
<td>Fabrication of perovskite and dye sensitized solar cells</td>
<td>2016</td>
<td>Completed 2019</td>
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<td>6.</td>
<td>Yakubu Sani Wudil</td>
<td>Physics Dept, KFUPM</td>
<td>Fabrication of thermoelectric films using Pulased laser deposition (PLD) system</td>
<td>2017</td>
<td>underprogress</td>
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<td>7.</td>
<td>Hasan</td>
<td>Physics Dept, KFUPM</td>
<td>Fabrication and characterization of symmetric and asymmetric super capacitors using novel electric field assisted pulsed laser ablation in liquid technique for the first time</td>
<td>2018</td>
<td>underprogress</td>
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<td>11</td>
<td>Mostafa Zeama</td>
<td>Study of Charge transfer in Photocatalytic reduction of CO2</td>
<td>2019 completed</td>
<td>Thesis Committee Member</td>
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<td>FATAI AYOFE LIADI</td>
<td>Elemental Analysis of Bulk Samples using 2.5MeV Neutron Inelastic Scattering (NIS)</td>
<td>2019 In progress</td>
<td>Thesis Committee Member</td>
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<td>13</td>
<td>Amar Kamal Mohamedkhair</td>
<td>Multi Criteria Design Optimization and Control of Community Scale Photo Voltaic Reverse Osmosis Water Desalination System</td>
<td>2019 In progress</td>
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<td>14</td>
<td>M.Naseer, ME Deptt, KFUPM</td>
<td>Synthesis, characterization and evaluation of Anticancer Activities of some gold complexes with Diamine Phosphine and Dithiocarbamte Ligands</td>
<td>2012 December, 2014</td>
<td>Thesis Committee Member</td>
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<td>S.S.Al-Jaroudi, Chemistry Deptt, KFUPM</td>
<td>Simulation Study of Laser Induced Fluorescence Spectra of Diatomic Molecules</td>
<td>2008 2011</td>
<td>Advisor</td>
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<td>16</td>
<td>Noura Suleman, Physics Dept, College of Science, King Faisal University, Dammam, Saudi Arabia</td>
<td>Synthesis of carbon nanotube based composites and thier applications</td>
<td>2010 2012</td>
<td>Co advisor</td>
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<td>17</td>
<td>Tawfik Abdo Saleh Chemistry Department, KFUPM</td>
<td>Theoretical and experimental aspects of laser induced breakdown spectroscopy</td>
<td>2008 2011</td>
<td>Advisor</td>
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<td>18</td>
<td>S. Ghadeer Physics Dept, College of Science, King Faisal University, Dammam, Saudi Arabia</td>
<td>Plasma Diagnostics using LIBS and its Applications in environmental samples analysis</td>
<td>2008 2011</td>
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<td>Ibrahim Olatunji Yusuf</td>
<td>Development of solar driven water purification system using functionalized nanocomposite photocatalysts synthesized locally</td>
<td>2019</td>
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<td>2</td>
<td>Popoola Abduljelili</td>
<td>Modifications of hybrid perovskite materials for</td>
<td>2019</td>
<td>2020</td>
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<td>Lutfi Mulyadi Surachman</td>
<td>Development of laser-induced breakdown spectroscopy technique for analysis of fish samples collected from the Rabian Gulf</td>
<td>2016</td>
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<td>4</td>
<td>I. K. Poppola, Phys KFUPM</td>
<td>Design and fabrication of Perovskite solar cells</td>
<td>2015</td>
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<td>5</td>
<td>Abu Lais, Phys KFUPM</td>
<td>Advanced materials for carbon dioxide reduction into high value products</td>
<td>2016</td>
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<td>6</td>
<td>Mohsin Sarwar, Phys KFUPM</td>
<td>Detection of heavy metals in human tissues using Laser induced breakdown spectroscopy</td>
<td>2016</td>
<td>2018</td>
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<td>REDHWAN ABD MOQBEL Phys KFUPM</td>
<td>Synthesis and characterization of GaAs and other semiconducting materials using PLAL technique</td>
<td>2016</td>
<td>2019</td>
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<td>8</td>
<td>M. ALTAHIR SULIMAN, Chem. KFUPM</td>
<td>Facile synthesis of metal oxide nanocrystals for removal of pesticides and herbicides from water</td>
<td>2015</td>
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<td>Abduliken Bake</td>
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<td>2016</td>
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<td>Adesida Kollopu, Chem. KFUPM</td>
<td>Synthesis and characterization of graphitic carbon nitride (g-C3N4) based nanostructured composites removal of organic pollutants from water</td>
<td>2014</td>
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<td>Y. Habibullah, Phys KFUPM</td>
<td>Laser induced breakdown spectroscopy applications for analysis of food products</td>
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<td>12</td>
<td>A.M. Ilyas, Phys KFUPM</td>
<td>Dye sensitized solar cells using self synthesized nano semiconductor materials</td>
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<td>13</td>
<td>F. Tasnim, Phys KFUPM</td>
<td>Synthesis and characterization of unique nanomaterials using pulsed laser ablation in liquids</td>
<td>2014</td>
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<td>14</td>
<td>L. Oloore, Phys, KFUPM</td>
<td>Synthesis of nanocatalysts for CO₂ conversion into high value hydrocarbons like methanol</td>
<td>2015</td>
<td>2015</td>
<td>Advisor</td>
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<tr>
<td>15</td>
<td>Yasin Maganda, Physics Department KFUPM</td>
<td>Analysis of cosmetic products using self developed time resolved ICCD Laser induced breakdown spectrometer</td>
<td>2013</td>
<td>2013</td>
<td>Advisor</td>
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<tr>
<td>No.</td>
<td>Name</td>
<td>Department/Department</td>
<td>Thesis Title</td>
<td>Year</td>
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<td>16</td>
<td>Talal Al-Qahtan</td>
<td>Physics Department KFUPM</td>
<td>Synthesis of nano alloys using pulsed laser ablation of organometalics</td>
<td>2013</td>
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<tr>
<td>17</td>
<td>Sadullah Subki</td>
<td>Physics Department KFUPM</td>
<td>Synthesis of hydrophobic and hydrophilic surfaces using spray gun</td>
<td>2014</td>
<td>2013</td>
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<tr>
<td>18</td>
<td>A.J. Al-Nehmi, Civil Engineering Department KFUPM</td>
<td>Assessment of Chloride and Sulfate Concentration in Concrete Using Laser-Induced Breakdown Spectroscopy (LIBS)</td>
<td>2010</td>
<td>2012</td>
<td>Co-Advisor</td>
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<td>19</td>
<td>Ahmed WaseemViqas</td>
<td>EE Department KFUPM</td>
<td>Plasmon-enhanced white light generation in phosphor based GaN LEDs</td>
<td>2014</td>
<td>2013</td>
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<td>20</td>
<td>S.S. Rashid</td>
<td>EE Department KFUPM</td>
<td>Active plasmonic:surface modulation</td>
<td>2013</td>
<td>2011</td>
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<td>21</td>
<td>A. M. H.Y. Hendi</td>
<td>Physics Department KFUPM</td>
<td>Synthesis and characterization of Bi₂O₃ nano-powder produced by microwave-assisted combustion method</td>
<td>2012</td>
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<tr>
<td>22</td>
<td>T.Al-Ali, Physics Department</td>
<td>King Abdul Aziz University, Jeddah,</td>
<td>Laser induced breakdown spectroscopy studies of plastic waste samples</td>
<td>2011</td>
<td>2012</td>
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<tr>
<td>23</td>
<td>K. Drmoosh</td>
<td>Physics Department KFUPM</td>
<td>Synthesis of nano structure metal oxides using laser ablation process</td>
<td>2008</td>
<td>2010</td>
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<tr>
<td>24</td>
<td>Mr. A. Al-Aswad</td>
<td>Physics Department KFUPM</td>
<td>Fabrication of heat mirrors using electron beam evaporation method</td>
<td>2007</td>
<td>2008</td>
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<tr>
<td>25</td>
<td>Mr. M.N. Sayeed</td>
<td>Chemistry Department, KFUPM</td>
<td>Laser induced phenol degradation using semiconductor catalysts</td>
<td>2006</td>
<td>2007</td>
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<tr>
<td>26</td>
<td>Mr. Rizwan Qureshi</td>
<td>Physics Department KFUPM</td>
<td>Study of Energy Transfer in Highly Excited States of Ca through Thermal Collisions with Ar</td>
<td>1995</td>
<td>1996</td>
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<tr>
<td>27</td>
<td>J. M. Mohammed Al-Maraschi</td>
<td>Department of Physics and Astronomy, King Saud University Riyadh</td>
<td>Generation of Discretly tunable lasers form some gases and liquids using stimulated Raman scattering(SRS)</td>
<td>2005</td>
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<tr>
<td>28</td>
<td>Ali Mohammad Alshehri</td>
<td>Department of Physics and Astronomy, King Saud University Riyadh</td>
<td>Quantitative elemental determination of industrial alloys by Laser Indused Breakdown Spectroscopy (LIBS)</td>
<td>2005</td>
<td>2006</td>
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<tr>
<td>S. No.</td>
<td>Title of Project</td>
<td>No of Students</td>
<td>Role</td>
<td>Semester</td>
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<tr>
<td>1</td>
<td>Fabrication and their UV degradation of Crumb Rubber Coatings of Hydrophobic nature</td>
<td>2</td>
<td>Co-Advisor with Dr. M. Al-Aqeeli</td>
<td>151</td>
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<td>2</td>
<td>Synthesis of Nano Zno particles for light emitting diodes</td>
<td>4</td>
<td>Co-Advisor with Dr. M. Al-Sunaidi</td>
<td>Term 151/152</td>
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<td>3</td>
<td>Design and Fabrication of Solar waste water treatment Unit Using Parabolic Collector (ME412)</td>
<td>3</td>
<td>Co-Advisor with Dr. A.K. Sheikh</td>
<td>Term 121/122</td>
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<td>4</td>
<td>Design and Fabrication of Solar Water Disinfection Units Using Parabolic Collector (ME412)</td>
<td>3</td>
<td>Co-Advisor with Dr. A.K. Sheikh</td>
<td>Term 112</td>
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<tr>
<td>5</td>
<td>Design and Fabrication of Solar Water</td>
<td>3</td>
<td>Co-Advisor with</td>
<td>Term 112</td>
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**Senior and Capston Projects Supervision**

<table>
<thead>
<tr>
<th>Title of Project</th>
<th>No of Students</th>
<th>Role</th>
<th>Semester</th>
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<tr>
<td>Fabrication and their UV degradation of Crumb Rubber Coatings of Hydrophobic nature</td>
<td>2</td>
<td>Co-Advisor with Dr. M. Al-Aqeeli</td>
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<tr>
<td>Synthesis of Nano Zno particles for light emitting diodes</td>
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<td>Co-Advisor with Dr. M. Al-Sunaidi</td>
<td>Term 151/152</td>
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<td>Design and Fabrication of Solar waste water treatment Unit Using Parabolic Collector (ME412)</td>
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<td>Co-Advisor with Dr. A.K. Sheikh</td>
<td>Term 121/122</td>
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<td>Design and Fabrication of Solar Water Disinfection Units Using Parabolic Collector (ME412)</td>
<td>3</td>
<td>Co-Advisor with Dr. A.K. Sheikh</td>
<td>Term 112</td>
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<td>Design and Fabrication of Solar Water</td>
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<td>Co-Advisor with</td>
<td>Term 112</td>
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<td>Project Description</td>
<td>Advisor(s)</td>
<td>Term(s)</td>
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<tr>
<td>Disinfection Units Using Flat Plate Collectors (ME412)</td>
<td>Dr. A.K. Sheikh</td>
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<td>6 Design, and Fabrication, of a UV Water Treatment Solar Collect, ME411/ME412 -</td>
<td>3 Co-Advisor with Dr. A.K. Sheikh</td>
<td>Term 101 and Term 102</td>
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<tr>
<td>Senior Design Project II</td>
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<tr>
<td>7 Laser induced Photocatalytic removal of phenol using ZnO, Course # Chem 409</td>
<td>1 Co-Advisor with Dr. N. Siddiqui</td>
<td>Term 092</td>
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<tr>
<td>8 Desulfurization of crude oil using laser induced photooxidative process, Course # Chem 409</td>
<td>1 Co-Advisor with Dr. N. Siddiqui</td>
<td>Term 082</td>
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<tr>
<td>9 Quality Assessment of High Tension Electrical Cables using LIBS”</td>
<td>4 Co-Advisor with Dr. M.H. Shwehdi</td>
<td>Term 082</td>
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<tr>
<td>Group of four senior students form EE department, EE 411</td>
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<tr>
<td>10 Simulation study for quality Assessment of High Tension Electrical Cables under high temperature and humidity, EE 411</td>
<td>4 Co-Advisor with Dr. M.H. Shwehdi</td>
<td>Term 082</td>
<td></td>
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<tr>
<td>11 Laser induced photo-catalysis for waste water treatment using TiO semiconductor catalyst, ME 411</td>
<td>4 Co-Advisor with Dr. Zaki. Ahmed</td>
<td>Term 071</td>
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<tr>
<td>12 Laser induced photo-catalysis for waste water treatment using TiO semiconductor catalyst, ME 411</td>
<td>4 Co-Advisor with Dr. Zaki. Ahmed</td>
<td>Term 071</td>
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<tr>
<td>13 Laser induced photo-catalysis for waste water treatment using TiO semiconductor catalyst, ME 412</td>
<td>4 Co-Advisor with Dr. Zaki. Ahmed</td>
<td>Term 081</td>
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<tr>
<td>14 Development of a novel setup for laser triggered high voltage electrical discharges using pulsed laser, EE 411</td>
<td>4 Co-Advisor with Dr. M.H. Shwehdi</td>
<td>Term 052</td>
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<tr>
<td>15 Laser Treatment of HVOF coated Inconel 625, ME 411</td>
<td>3 Co-Advisor with Dr. B.S. Yilbas</td>
<td>Term 042</td>
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<tr>
<td>16 Two Summer Training of Saudi Master student on Laser induced breakdown spectroscopy</td>
<td>1 Advisor</td>
<td>Term 031</td>
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<tr>
<td>17 Designing of experiment for measurement of evaporated front velocity during laser-metal piece interaction, ME 411</td>
<td>1 Co-Advisor with Dr. B.S. Yilbas</td>
<td>Term 021</td>
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<tr>
<td>18 Study of laser application for the surface treatment of mechanical component, ME 411</td>
<td>3 Co-Advisor with Dr. B.S. Yilbas</td>
<td>Term 011</td>
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<tr>
<td>19 Study of laser application for the surface treatment of mechanical component, ME 412</td>
<td>3 Co-Advisor with Dr. B.S. Yilbas</td>
<td>Term 012</td>
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<td>20 Trace gas analysis and leak detection based on photoacoustic technique using CO2 laser, PHYS 407</td>
<td>1 Advisor</td>
<td>Term 011</td>
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<tr>
<td>21 Trace gas analysis and gas leak detection using photoacoustic spectroscopy, Student name: Fahd Al-Subahi</td>
<td>1 Advisor</td>
<td>Term 011</td>
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</table>
Mentorship of High School Saudi Girls

- International Science and Engineering Fair (ISEF) 2019 USA (Three Girls named Deemah, Shouq and Wid won prize in ISEF)
- Seven girls won Ibda prizes competition out of 83000 students (total winners =108 nationwide)
- Five Girls won at National level competition held in Riyadh to go to USA from 108 students.
- One male student and five girls won Moheba award from eastern province 2020 competition.

Teaching Profile:

As Physics Department has no Ph.D. program till 2013 (started in 2014) and also very limited students are available in Master program so most of the teaching load at Physics Department for professors is to teach basic service courses like General Physics (PYP 01, Phys 101 and Phys 102) in large lecture format (LLF). I have taught and developed several courses whatever were assigned to me by chairman Physics department. Since laser have many applications in various disciplines so in addition, I have carried out many senior and capstone projects for undergraduate students from various departments and supervised many master and Ph.D. thesis from various departments like Physics, Chemistry, Mechanical Engineering, Electrical Engineering Department, Women College Dammam and Other International Universities. The details of the Ph.D, Master and Senior Projects are described on earlier pages in the Resume. Followings courses were taught at KFUPM.

<table>
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<tr>
<th>Semester</th>
<th>Course</th>
<th>Department</th>
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<tr>
<td>Fall 1993-94</td>
<td>Recitation -Phys.101 General Physics-I</td>
<td>Physics</td>
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<tr>
<td>Fall 1993-94</td>
<td>Phys.503 Experimental Physics</td>
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<tr>
<td>Fall 1993-94</td>
<td>Senior Projects (Phys.403)</td>
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<tr>
<td>Fall 1994-95</td>
<td>Phys.503 Experimental Physics</td>
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<td>1995-96</td>
<td>Phys.610 M.S. Thesis</td>
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<td>Spring 1998-99</td>
<td>Physics 102 Lab (four sections)</td>
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<td>Fall 1999</td>
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<td>Spring 1999-2000</td>
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<td>Fall 2000-2001</td>
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<td>Spring 2001</td>
<td>(Phys 403, Co-op summer training) Trace gas analysis using photoacoustic technique With CO2 laser</td>
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<td>Spring 2003</td>
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<td>Fall 2003</td>
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<tr>
<td>Spring 2004</td>
<td>Physics 102 Lab</td>
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<tr>
<td>Fall 2004 (041)</td>
<td>Physics 102 Lab(two sections)</td>
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<td>Spring 2003</td>
<td>Physics 503 (experimental Phys. at MS level)</td>
<td>Physics</td>
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<tr>
<td>Spring 2004</td>
<td>Physics 503 (two different experiments)</td>
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<td>Spring 2005(042)</td>
<td>Physics 102 (LLF+ Recitation 3 sections)</td>
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<td>Summer 2005 (043)</td>
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<td>Summer 2005(043)</td>
<td>Physics 102 (Lab), EE411</td>
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<td>Autumn 2005 (051)</td>
<td>Physics 102(LLF+ Recitation 3 sections)</td>
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<tr>
<td>Physics 503</td>
<td>Experimental Physics at MS level</td>
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<tr>
<td>Spring 2006 (052)</td>
<td>Physics (LLF+ Recitation 3 sections)</td>
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<td>PYP 01 2006 (052)</td>
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<td>Elec.Eng.</td>
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<td>Autumn 2006(061)</td>
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<td>PYP 01 2006</td>
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<td>PYP 01 2006 (062)</td>
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<td>PYP 01 2006 (062)</td>
<td>Physics 503</td>
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<td>Physics, Mechanical Engg.Dept.</td>
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<td>Physics (LLF+ Recitation 3 sections)</td>
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<td>Phys 102 Lab</td>
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<td>Phys 102 Lab, Phys 503,EE411</td>
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<td>Spring 2009 (092)</td>
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<td>Spring/autum 2010-2017</td>
<td>Physics 101, Physics 102</td>
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<tr>
<td>Spring 2014 -2017</td>
<td>Physics 503 Experimental Physics at MS, PhD Level.</td>
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<tr>
<td>Spring/autum 2014-2017</td>
<td>Phys 701, Special topic course in laser applications</td>
<td>Physics</td>
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Courses taught at Post Graduate Center For Electro-optics Tripoli

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<th>Year</th>
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<tr>
<td>1986</td>
<td>Laser Systems and their Applications</td>
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<td>1987</td>
<td>Atomic Physics</td>
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<td>1988</td>
<td>Molecular Physics</td>
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<td>1989</td>
<td>Laser Physics</td>
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Research Leadership and Development of Laboratories

I have developed excellent research leadership skills, which is evidenced through patents, number of publications, quality of publications, research proposals, and science citations and applied research projects. Seven of my recently published papers have been listed in top 25 as cited by Science Direct. In spite of my heavy commitment to my basic research area of atomic and molecular spectroscopy and teaching activities, I managed to keep my research active to cover diversified fields by developing the laser applications in various engineering and scientific problems as per needs of the community at large and the Kingdom in particular and in syncronization with the SNTP (Strategic National Technology Plan) laid down by ministry of higher education and KACST.

I have published around 390 scientific papers in international refereed journals and conferences such as nature communications, Nature Scientific Reports, Applied Materials and Interfaces, Applied Optics, J. Physics B, Optics Communications, Chemical Physics Letters, J. Molecular Spectroscopy, Applied Phys B, Spectroscopy Letters, Laser & Optics in Engineering, Nanotechnology, Applied Materials & Interfaces, Applied Surface Science, Science of Advanced Materials, J. Hazardous Materials, J. Nanoparticle Research, Talanta, Applied Catalysis B and A, J. Molecular Catalysis, Catalysis Communication and Conferences of high repute such as Conference on Lasers and Electro-optics (CLEO) and Quantum Electronics and Laser Science Conference, Colloquium Spectroscopicum Internationale, International Quantum Electronics Conference (IQEC) and other regional conferences. 20 Patents on my latest inventions have been issued and more than 30 published by US patent office. My research work has been cited in various international journals and got over 7150 Citations with H index 44 as per Google Scholar.

I have interacted and shared my knowledge (through seminars) with the scientific community at KFUPM, other universities of the Kingdom and even at the international forums like International Center for Theoretical Physics (ICTP), Trieste Italy, European, American, Australian, Brazilian and Middle East Universities. I have floated many original and innovative ideas for different research projects, which have been tested experimentally and accepted for publications in journals of high repute. I have not only worked in my major field of Physics but also contributed reasonably well to interdisciplinary fields such as Nanotechnology, Renewable Energy, Oil Water Separation by Developing Wetting and Non Wetting Surfaces, Material Science, Chemistry, Electrical & Mechanical Engineering and Environmental Science, Earth Science (Geology), Civil Engineering, Petrochemical & Refining and Petroleum Engineering. I have collaborated with scientists from these departments (e.g. Chemistry, Electrical, Mechanical, Earth Sciences, Civil, CRP and PE).

I have submitted many Research proposals and numerous technical discussion papers (ideas) to Saudi-Aramco, SABIC, Saudi Electric Company, BeeAh, Bitumat, KACST, and to other local industries/organizations in the
Kingdom. I have managed, co-coordinated and supervised and completed 13 research projects in the above mentioned areas of basic and applied nature funded internally and externally by clients. I have compiled many Scientific/Technical reports regarding these projects.


I have been on different occasions external examiner for Master and Ph. D. students from King AbdulAziz University, Jeddah and Victoria University, Melbourne Australia, King Saud University Riyadh, National University of science and Technology (NUST), Pakistan and Indian Universities. I supervised Nine PhD students. I have been supervisor/co-supervisor for master and senior projects from physics department, mechanical engineering, electrical engineering and chemistry department. I have taught different physics courses as outlined in the CV. My professional and community services covers different activities like teaching, co-ordination and participation in many committees, organizing exhibition, short course and supervising senior projects.

Based on accomplishments in the research, teaching, marketing and other activities, my annual performance evaluation for the last 22 years have been rated as “OUTSTANDING” and I have been awarded Distinguished Professorship award from 2009/2010 which is only awarded to three professors in whole KFUPM.. In addition, I have been awarded many national and international awards such as Al-Marai prize, Prince Mohammed Bin Fahd Best Team Award for Excellence in Research in 1995, the Distinguished (Best) Researcher award by KFUPM for the year 2005-2006 based on my research publications and research projects. I am also one of the recipient of the Best Research Paper award, instituted by the British Mechanical Engineers in 2007. Also awarded the Best Paper Award on “Detection of Ozone using Fourth Harmonic of Nd:YAG Laser at 1st International Conference & Exhibition on Laboratory Technology, Manama Bahrain(Oct 20-22, 2008). I was also awarded the best project award among many contenders for year 2008/2009 by KFUPM . Three of my patents on my latest inventions have been published by US patent office. Due to my research profiles, I have been selected as a member Editorial Boards of Eight Journals, AJSE, J. Sensors & Instrum, Int J.Spectroscopy, Int. J.Photoenergy, J.Eng, j. Env.&E. Sci, J.App. Sci, Eng & Tech, Pak. J. Anal. Chem. & Environ. Apart from these distinctions, I have collaborations (Research Projects & Thesis Co-Supervisions) with Chemists, Geologists Chemical Engineers, Mechanical Engineers, and Electrical, Civil and Petroleum Engineers and Material Scientists at KFUPM, and International Institution like Nanjing university China, MIT, USA, National University Singapore, KAUST, IST, and NUST Pakistan.

**Laboratory Development Activities:**

Worked on the development of the following laboratories:

- **Developed an Environmental Lab for monitoring of Atmospheric Pollution** and for trace gas analysis using self-developed photoacoustic spectrometer at Physics Department, KFUPM. The sensitivity achieved with this system is very high ~ pptV and this system has been tested for analysis of gases emitted from the automobile exhaust and also for detection of leaks. A project entitled “in situ detection of SF₆ leaks in power systems using laser” funded by SABIC UR grant was completed and also Saudi Electric Company and one Korean company specialized in Electrical Testing Equipment showed strong interest in the development of a mobile system for detection of leaks in switchgears high power electrical systems.

- **Laser Induced Breakdown Spectrometer** (LIBS) was developed at Physics Department, KFUPM and applied for detection of carcinogenic and poisonous contaminants in food and cosmetic products, oil slicks, paints, oil residue samples, oil slicks, iron slag, industrial waste, plastic waste, oelican eruptions, old mines samples, drinking water, geological rocks and other solid samples. Completed many projects funded through the Deanship of University and KACST.

- **Development of a LIDAR** (light detection and ranging) system for remote monitoring of environment and for other applications in the field of Petroleum industry at Physics Department, KFUPM. A prototype...
system at Lab scale was built using second harmonic of Nd: YAG laser and a telescope having an eight-inch collecting mirror. The telescope has been replaced recently with commercial unit having 16 inch dia collecting mirror. The range resolved study of some pollutants i.e. SO$_2$, NO$_2$ has been studied in the differential absorption mode in the laboratory environment. The system has been also tested for the analysis of clouds up to the range of 13 km. Two papers were published which got some international recognition in terms of science citations.

- A Doppler LIDAR was developed using ring dye laser and was applied for the remote monitoring of polluted liquid and gaseous discharges.

- **Synthesis of Nano Materials** using “Pulsed Laser Ablation Process” and chemical methods (sole gel, precipitation etc) for various applications in the field of environment, water purification, fuel cells, sensors, petrochemicals and hydrogen production, carbon management by reduction of CO$_2$ into value added products like methanol, conversion of green house gases like methane into methanol, removal of heavy metals from water, disinfection of water.

- **Synthesis of Super Hydrophobic, Hydrophilic and Oleophobic surfaces** for oil water separation and self cleanings surfaces using Layer by Layer (LBL) coating, spin coating and cost effective pressurized spray coating techniques developed at KFUPM which is being highly utilized in a joint project with MIT on oil water separation.

- Developed facility for **Dye Sensitized and Perouskite Solar Cells (DSSC)** fabrication at KFUPM.

- Worked on the development of a setup for laser methane cracking using UV laser for Generation of Higher Hydrocarbons (gaseous phase) and Hydrogen under SABIC/URC project funding scheme.

- Worked on the development of a setup for Photocatalysis Conversion of Methane and CO$_2$ into methanol, production of hydrogen, water treatment and disinfection of bacteria in water using solar and UV laser under SABIC/URC, NSTIP, KACST projects funding.

- Participated in ongoing project on development of a facility for “Regeneration of coaked zeolite (catalyst) using a laser photolysis - glow discharge hybrid system” under SABIC/URC project funding scheme.

- Participated in the project for development of facility for non-destructive testing of materials using laser-generated ultrasound.

- Working on Development of New Tunable Laser Sources in the UV and visible region based on Stimulated Raman Scattering process for LIDAR System.

- Working and completed project on Laser Desulfurization of Crude Oil and proposal has been submitted to Saudi Aramco. A patent has been issued

- Completed a joint research five year approved internal project # 12043 on “Investigation of Laser Excited Alkaline Earth Metal Atoms”.

- Working as principal investigator /task leader on various projects of applied nature in joint collaboration with academic departments and RI centers. Designed and developed various experiments to carry out the applied research projects. Most of the research work has been published in ISI Q1 ands Q2 refereed journals, conference proceedings as well as in project reports.

- Completed many projects (long term and short term) of basic and applied nature funded externally and internally by KFUPM as listed in under project section.

- Was Invited to Deliver keynote Speeches /talks/ Lectures on international and national forums as mentioned earlier under seminars etc.
• Have been advisor/ co-advisor / memebr for 9 Ph.D and 14 M.S. thesis students

• Supervised many senior, capstone and Co-op projects in collaboration with faculty memebrs from other departments like EE, ME, Chem and parent department of Physics.

Training of Young Saudi faculty and collaboration with other Faculty members from Different Departments/Institutions

Following KFUPM faculty/staff members were initiated in Research (please see funded projects and Research Publications).

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Department/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Z.H. Yamani</td>
<td>Phys. Dept.</td>
</tr>
<tr>
<td>2</td>
<td>Z.Sedighi</td>
<td>UmmulQurah, Mekka</td>
</tr>
<tr>
<td>3</td>
<td>Nasir Aqeeli</td>
<td>ME Dept</td>
</tr>
<tr>
<td>4</td>
<td>H.Masoudi</td>
<td>EE Dept, KFUPM</td>
</tr>
<tr>
<td>5</td>
<td>Gareth H. McKinley</td>
<td>ME, Deptt, M.I. T., USA</td>
</tr>
<tr>
<td>6</td>
<td>Abdulaziz Bagabas</td>
<td>KACST, Riyadh</td>
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<tr>
<td>7</td>
<td>Kripa K. Varanasi</td>
<td>ME, Deptt, M.I. T., USA</td>
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<tr>
<td>8</td>
<td>John Lienhard</td>
<td>ME, Deptt, M.I. T., USA</td>
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<tr>
<td>9</td>
<td>Gibum Kwon</td>
<td>ME, Deptt, M.I. T., USA</td>
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<tr>
<td>10</td>
<td>G. K. CHUAH</td>
<td>Chem. Deptt, NUS Singapore</td>
</tr>
<tr>
<td>11</td>
<td>Y. Messedq</td>
<td>Phys. Deptt, Université Laval, Canada</td>
</tr>
<tr>
<td>12</td>
<td>A.H. Bakary</td>
<td>KAAU, Jeddah</td>
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<tr>
<td>13</td>
<td>A.Arfaj</td>
<td>Chem. Dept.</td>
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<tr>
<td>14</td>
<td>S.M.Zubair</td>
<td>ME, Deptt</td>
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<tr>
<td>15</td>
<td>G.Khattak</td>
<td>Phys. Dept</td>
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<td>16</td>
<td>A. Mekki</td>
<td>Phys. Dept</td>
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<td>17</td>
<td>Saleem Rao</td>
<td>Phys. Dept</td>
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<td>18</td>
<td>Shanker</td>
<td>Phys. Dept</td>
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<td>19</td>
<td>M. Al-Harti</td>
<td>Chem Eng. Dept</td>
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<tr>
<td>20</td>
<td>M.I. Ismail</td>
<td>KAAU, Jeddah</td>
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<td>21</td>
<td>Josef Pola</td>
<td>Parague Check Republic</td>
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<tr>
<td>22</td>
<td>M.H. Shwehdi</td>
<td>EE, Deptt and KFU</td>
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<tr>
<td>23</td>
<td>G. Mackenley</td>
<td>MIT</td>
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<td>24</td>
<td>K. Varanasi</td>
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<tr>
<td>25</td>
<td>Z. Ahmed</td>
<td>Earth Science Dept.</td>
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<tr>
<td>26</td>
<td>N. Siddiqui</td>
<td>Chem. Dept.</td>
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<td>27</td>
<td>M. A. Ali</td>
<td>CPR, RI</td>
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<td>28</td>
<td>B. S. Yilbas</td>
<td>ME. Dept</td>
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<td>29</td>
<td>M. Arif</td>
<td>ME. Dept</td>
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<td>30</td>
<td>T. Hussain</td>
<td>Phys. Dept</td>
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<td>31</td>
<td>M. N. Sayeed</td>
<td>Chem. Dept.</td>
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<td>32</td>
<td>A. Hameed</td>
<td>Envirn. C.E. KAAU, Jeddah</td>
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<tr>
<td>33</td>
<td>M. Nasr</td>
<td>Phys. Dept, Riyadh Medical College</td>
</tr>
<tr>
<td>34</td>
<td>K. Hayat</td>
<td>Chem. Dept.</td>
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<tr>
<td>35</td>
<td>K. Drmoosh</td>
<td>CENT</td>
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</tbody>
</table>
Consultancy to National and International Scientific Institutes (visits)

- Center for Optics and Photonics (http://www.cercp.ca/en/team/), Laval University, Quebec, Canada: contact and collaborator; Dr. Younes Messaddeq, Chaired Professor.

- Institute of Environmental Sciences and Engineering, National University of Sciences and Engineering (NUST, ranked at 350th in the world ranking), Rawalpindi, Pakistan for setting up labortory for envirmemntal monitoring using laser remote sensing technique, 2003 - 2008.

- Institute of Space Technology (IST) Islamabad, Pakistan for setting up Center of excellence in Advanced Materials (2013-till date)

- Invited as Visiting Professor, Physics Department, Free University Berlin, FR Germany to enhance the research in laser based pollution monitoring technique such as LIBS.(Summer, 2003) LIDAR.

- Invited as Visiting Professor, Institute of Physical Chemistry University of Heidelberg, FR Germany to enhance the research in laser based pollution monitoring technique such as Photoacoustic. (Summer, 1995)

- Consultancy to Physics Department, King AbdulAziz University, Jeddah for setting of Laser laboratory for pollution monitoring using Photoacoustic and LIBS technique and to establish research collaboration among KFUPM and KAAU. Visited many times to KAAU and also advised young saudi faculty for master thesis. Dr A. Bakari and Dr. Reem specialist in laser spectroscopy from Physics department KAAU are the contact persons.

- Institute of Hydrochemistry Technical University Munich, Consultancy on applications of photoacoustic spectrometry for detection of water in oil for off shore drilling platforms, Contact Person: Dr. Christoph HAISCH and his group

- Physics Department, University of Qatar Consultancy on applications of laser induced breakdown spectroscopy for detection of trace metals and spectral analysis assignment. Contact Person: Dr. Mosa Al-Rabban.

- Physics Dept, King Saud University (KSU) for joint research work and help. Consultation for establishment of joint research program on LIBS. Contact Person: Dr. Saleh Al-Slaehi

Community Services and Committee work:

<table>
<thead>
<tr>
<th>Year</th>
<th>Committee and its Role</th>
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<tbody>
<tr>
<td>1992</td>
<td>Member, Committee responsible for evaluation of servicing and maintenance of TEA CO2 laser system.</td>
</tr>
<tr>
<td>1993</td>
<td>Member, Committee responsible for reviewing internal reports and publications of Division-II, R.I.</td>
</tr>
<tr>
<td>1994</td>
<td>Member, Committee responsible for the study of laser applications in leak detection across pipelines. Member, Equipment Receiving Committee, R.I.</td>
</tr>
<tr>
<td>1995</td>
<td>Member, Committee appointed by H.E. the Rector, responsible for organizing a 10 days exhibition on lasers and their applications entitled &quot;Lights on Light&quot; at KFUPM.</td>
</tr>
<tr>
<td>1996</td>
<td>Member, committee responsible for technical co-operation and interface with industry.</td>
</tr>
<tr>
<td>1997</td>
<td>Member, committee responsible for technical co-operation and interface with industry. Member, Conference and publication committee by Vice Rector, Applied research.</td>
</tr>
<tr>
<td>Year</td>
<td>Role</td>
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<tr>
<td>1998</td>
<td>Member promotion committee, Member, Annual award evaluation committee, Member, planning committee for next Five years research projects and marketing plan for Laser Research Section (LRS), Co-coordinator for monthly progress report of LRS</td>
</tr>
<tr>
<td>1999</td>
<td>Member committee for Short course on laser and their applications, Chairman - Equipment maintenance committee, Member -Planning committee for next two years research projects and marketing plan for LRS, Member, planning committee for next Five years research projects and marketing plan for Laser Research Section (LRS); Co-coordinator for monthly progress report of LRS</td>
</tr>
<tr>
<td>2002</td>
<td>Member Adhoc Committee for best researcher award for RI</td>
</tr>
<tr>
<td>2002-2003</td>
<td>Member Adhoc Committee for Team incentive award Co-coordinator for monthly progress report of LRS, Member Adhoc Committee for Team incentive award Co-coordinator for monthly progress report of LRS</td>
</tr>
<tr>
<td>2003-2004</td>
<td>Member Adhoc Committee for salary adjustment, grievances and campus housing for RI employees</td>
</tr>
<tr>
<td>2004-2005</td>
<td>Member Standing Committee for Research for Physics Department, Member Standing Committee Phys 102 for Physics Department</td>
</tr>
<tr>
<td>2005-2006</td>
<td>Member Standing Committee Phys 102 for Physics Department, Chairman Standing Committee for Teaching for Physics Department, Member Standing Committee for Research for Physics Department, Member Standing Committee for allexperimental Labs for Physics Department</td>
</tr>
<tr>
<td>2006-2007</td>
<td>Member, University Research Advisory Committee to promote research at KFUPM under chairmanship of H.E. Rector., Member Standing Committee for industrial liason for Physics Department Member Standing Committee for Teaching, Physics Department, Member Standing Committee for Research for Physics Department</td>
</tr>
<tr>
<td>2007-2008</td>
<td>Member, University Research Advisory Committee to promote research at KFUPM under chairmanship of H.E. Rector. Member Standing Committee for Teaching for Physics Department, Member Standing Committee for Research for Physics Department Member Standing Committee Phys 102 for Physics Department</td>
</tr>
<tr>
<td>2007-2009</td>
<td>Member Standing Committee to develop plan for Ph.D. program at Physics Department</td>
</tr>
<tr>
<td>2008-2009</td>
<td>Member Standing Committee Phys 102 for Physics Department Member Standing Committee for Research for Physics Department Member IMEG (Infrastructure and Major Equipment Grant) committee Member committee responsible for Distinguished Research Award</td>
</tr>
<tr>
<td>2009-2010</td>
<td>Member Standing Committee University Scientific Research Council, Member Adhoc Committee for formulation of Guidelines for best Thesis Award, Member Adhoc Committee for formulation of Guidelines for best Thesis Award, Chairman, faculty promotion Committee Member Standing Committee Phys 102 for Physics Department</td>
</tr>
<tr>
<td>2010-2011</td>
<td>Chairman, faculty promotion Committee Member, faculty promotion Committee</td>
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<tr>
<td>Years</td>
<td>Role and Responsibilities</td>
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<tr>
<td>2011-2015</td>
<td>Member, faculty promotion Committee, Distinguished professorship committee, Member Standing Committee for Research and Industrial Liaison for Physics Department, Member, faculty promotion Committee, Physics 102 teaching committee</td>
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<tr>
<td>2013-2014</td>
<td>Chairman, Standing Committee for Research and Industrial Liaison for Physics Department, Member Exam Committee Physics 101</td>
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<td>2013-2015</td>
<td>Member University Scientific Research Council</td>
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<td>2015-2016</td>
<td>Member Department Hiring Committee</td>
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<td>2014-2018</td>
<td>Member University Scientific Council</td>
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<tr>
<td>2016-2017</td>
<td>Member Advisory Committee Chairman Physics</td>
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<tr>
<td>2011-till date</td>
<td><strong>Member Editorial Boards of 7 Journals</strong></td>
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