**Associate Professor**

#### Physics and Astronomy Department, College of Science, King Saud University, Riyadh, Saudi Arabia.

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**Managing Editor Special Issue Frontier in Biosciences (USA) Impact Factor 2.497**

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H index 19

**A C A D E M I C Q U A L I F I C A T I O N S**

**Doctor of Philosophy (PhD)** (2001-2005)

University of Hull, UK; Department of Physics;

Thesis title: Fluorescence dynamics studies of a Dye (PDT Photosensitiser)

**Postgraduate certificate in research (PGCR)** (2004)

University of Hull, UK; Department of Physics

**Master of Philosophy (MPhil)** (1993- 1995)

Quaid-I-Azam University, Islamabad, Pakistan; Department of Physics,

Thesis title: Construction of an atomic beam apparatus forlaser spectroscopic studies.

**Master of Science (MSc)** (1991- 1993)

University of Agriculture, Faisalabad, Pakistan; Department of Physics,

Thesis title: Fabrication and performance study of digital anemometer.

**E X T R A C O U R S E S**

Basic communication skills University of Hull

Safety in research in science and engineering University of Hull

German language course German language centre

Grundstufe-1 “Befriedigend”

Confocal Laser Scanning Microscopy Carl Zeiss company Jena, Germany

**SPECIALIZATION:** Laser Physics, Biophotonics, Photodynamic Therapy and Microscopy

**HONORS & ACADEMIC AWARDS:**

1. Award for presentation from Firat University Turkey.
2. Best Researcher Paper award from Higher Education Commission, Pakistan September 2015.
3. Best Researcher Paper award from Higher Education Commission, Pakistan September 2013.
4. RPA Award Winner 2012 and 2013
5. Best Researcher Paper award from Higher Education Commission, Pakistan October 2011.
6. Awarded *Tamgha-e-Baqa* by president of Pakistan for recognition of hard work and best performance in 1998.
7. International Science scholarship by the University of Hull, UK
8. Managing Editor Frontier in Biosciences
9. Science Direct Top 25 Hottest Articles Ranked 17

**M. Atif**, Mark R Stringer, Janet E Cruse-Sawyer, and Stanley B Brown. (2004) “Fluence-Rate Effects upon mTHPC Photobleaching in a formalin-fixed cell system” *Photodiagnosis and Photodynamic therapy* Amsterdam: Elsevier.Volume 1(2), 173-180.

1. Scholarship of Higher Education commission for PhD.
2. Infaq Foundation Scholarship from Higher Education commission for MPhil.
3. 2nd position in the Department of Physics, Quaid-i-Azam University, Islamabad
4. 2nd position in the Department of Physics, University of Agriculture, Faisalabad

**Member of Scientific societies:**

**Member Technical Program Committees** 2014 International Conference on Biological Engineering and Biomedical will take place during January 10-12, 2014 in Yichang, China.

**Major Achievements:**

1. I participated in the establishment of Laser Spectroscopy Laboratory at Pakistan Institute of Lasers & Optics (PILO) Rawalpindi using different types of lasers, dye lasers, hotwire detector.
2. I participated in the establishment of Biophotonics Laboratory at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad using PDT laser, Double integrating Sphere, Muller Matrix Polarimetry.
3. I participated in the establishment of Biophotonics Laboratory at National Institute of Lasers & Optronics (NILOP) Islamabad using using PDT laser, Double integrating Sphere, Muller Matrix Polarimetry and Laser Scanning Confocal Microscope.
4. I participated in the start of Bio-photonics and Photodynamic therapy activity in Pakistan for the basic research and development in this innovative field and its application for the treatment of skin cancer and other malignant diseases during my stay at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad and National Institute of Lasers & Optronics (NILOP) Islamabad. We provide the basic research, diagnostic and treatment facility for optical laser tissue interaction.
5. About 04 Masters Thesis completed under my supervision two as supervisor and two as Co-Supervisor.
6. Two MPhil Physics thesis are completed under my Supervision as a Co-Supervisor.
7. Two PhD Physics thesis are completed under my Supervision one as a Supervisor and one as a Co-Supervisor.
8. Two PhD students prepared and published their three research papers in ISI indexed journals under my supervision.
9. The cancer treatment using laser was started when I was Assistant Professor at PIEAS and I participated on the clinical front in the photodynamic therapy (light based cancer treatment) and forty skin cancer patients are treated using this therapy. The results of treatment are published in ISI index journal of Laser Physics.
10. I participated at King Saud University for studying Optical Biopsy of Breast cancer tissue. Varieties of optical methods are used currently for the early detection of breast cancer. They include Fluorescence Emission Spectra (FES) and Synchronous Fluorescence Spectra (SFS) a very promising technique due to its simplicity and reasonable reliability.
11. I participated in the research led to the discovery of lung cancer biomarker by synchronous fluorescence excitation spectroscopy.
12. I participated in the detection and diagnosis of Prostate Cancer by autofluorescence analysis of certain set of biomarkers in urine.
13. I participated in the developing methods to differentiate benign from the malignant tissue and also to do spectral grading of malignancy similar to Gleason Index.

**Research Areas:**

Laser/Optical Physics, Bio-Photonics Photodynamic Therapy and Confocal Microscopy, Nanomedicine.

**Research Interests**

1. Optical Biopsy of Breast cancer tissue. Varieties of optical methods are used currently for the early detection of breast cancer. They include Fluorescence Emission Spectra (FES) and Synchronous Fluorescence Spectra (SFS) a very promising technique due to its simplicity and reasonable reliability.
2. Discovery of lung cancer biomarker by synchronous fluorescence excitation spectroscopy of blood plasma and sputum.
3. Detection and diagnosis of Prostate Cancer by autofluorescence analysis of certain set of biomarkers in urine
4. Methods to differentiate benign from the malignant tissue and also to do spectral grading of malignancy similar to Gleason Index.
5. Laser Induced effects in different biological samples
6. Confocal microscopy of different cell lines.
7. Characterization of biomaterials using polarimetric techniques.
8. Polarization Sensitive Optical Imaging of Biomaterial using Mueller matrix Polarimetric Technique
9. The optical polarimetric study of blood malignancy in vitro for diagnostic and treatment of blood cancer
10. Mueller Matrix Polarimetry for the Charactrization of Normal and Malignant Tissue Samples
11. Optical Properties Measurement using Double Integrating Sphere
12. In vitro study of 5 Aminolevulinic acid (5-ALA) based photodynamic Therapy for apoptosis in human cervical HeLa cell line
13. Study of the efficacy of 5 ALA-mediated photodynamic therapy on human larynx squamous cell carcinoma (Hep2c) cell line
14. 5-ALA PDT for Basal & Squamous Cell Carcinoma (BCC & SCC)
15. Monte Carlo Simulation of laser light through human tissue
16. Labelling and optimization of Photofrin with 99mTc

**Current Research**

Currently my research is towards

1. **Bio-imaging:**

Confocal imaging of bio-materials

2. **Bio-photonics:**

Laser tissue interaction, Tissue parameter, Bio-material characterization

3. **Tissue polarimetry:**

Polarimetric study using Stokes-Muller matrix models for bio-materials.

4. **Modeling and Simulation:**

Monte carlo simulation of light interaction with tissues and optical materials..

5. **Photodynamic theraphy (PDT):**

Photodynamic therapy Skin diseases (Diagnostics, treatment)

6. **Nanobiotechnology:**

Development and culturimg of Cell lines, HeLa, fiberblast and Stems Cells (Cell line,

therapy).

**Brief Summary of my research is as follows**

1. **Optical Diagnosis of cancers using blood urine and sputum**

We are studying Optical Biopsy of Breast cancer tissue. Varieties of optical methods are used currently for the early detection of breast cancer. They include Fluorescence Emission Spectra (FES) and Synchronous Fluorescence Spectra (SFS) a very promising technique due to its simplicity and reasonable reliability. Secondly our research led to the discovery of lung cancer biomarker by synchronous fluorescence excitation spectroscopy of blood plasma and sputum. Thirdly we are detecting and diagnosis of Prostate Cancer by autofluorescence analysis of certain set of biomarkers in urine. We are also developing methods to differentiate benign from the malignant tissue and also to do spectral grading of malignancy similar to Gleason Index.

1. [**Nanoparticle-based targeted drug delivery**](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3249419/)

The prime focus of my research is to investigate the toxicity caused by morphologically different nanostructures obtained by annealing at various annealing temperatures. Smart nanomaterials are a very promising class of nanomaterials, and their properties can be controlled by altering their size, morphology, or other relevant characteristics. The samples were grown by the co-precipitation technique. Toxicity-dependent parameters were assessed in different cell models after annealing at different temperature. After the overall characterization, an analysis of toxicity caused by changes in the nanostructure morphology was tested in different cell models using a neutral red assay and confocal microscopy. The feasibility of using nanoparticles/nanomaterials for PDT was assessed. Empirical modelling was applied to corroborate the experimental results obtained from assessing cell viability losses and reactive oxygen species.

1. **Laser induced enhancement of energy storage and conversion properties of embedded double metal sulfides in three-D graphene**

Among the green energy resources, renewable energy is the best solution to the both problems. Recently, development of electrochemical process for synthesis of energy storage and conversion devices such as supercapacitors, lithium ion batteries, electro and photo-assisted water splitting and solar cells have gained great attention. Although, the efficiency of these devices have been limited as they have already reached the intrinsic limit of most of the known materials used in these technologies. In order to reduce the cost and to improve the performances of these devices by utilizing the available resources present in the country, it is essential to investigate novel materials with various architectures that display best performances while exploiting their unique features such as high surface area, good electronic and ionic conductivity and unusual size effects along with compositional variants. In this regard, metal sulfides have proved to be the suitable new material for energy storage devices due to its high electronic conductivity as compared to their corresponding metal oxides. By utilizing Sulphur oxides, there is a room with other combinations to enhance the efficiency and durability of electrochemical based energy storage and conversion devices. In the present project we will carry out investigation on development of energy storage and conversion devices using double metal Sulphur embedded in 3D graphene. We believed that the synthesized of double metal sulfides nanostructures with optimum morphology can accommodate large strain without pulverization, and can also display fast electron transport, fast ion diffusion making them an excellent choice as electrode materials for several types of energy storages and conversion devices. Moreover, we believe that their electrochemical performance will be further enhanced by synthesizing their nanocomposites with various highly conductive metal oxides and high surface area carbon based materials like graphene.

1. **Collaboration with other Departments:**
   1. Laser Laboratory, PIEAS, Islamabad.
   2. PDT Laboratory, NORI, Islamabad.
   3. Center for Virology, NIH, Islamabad.
   4. NCVI, NUST, Islamabad.
   5. Wellman Center for Photo medicine, Harvard University, USA.
   6. Bio-medical Engineering Dept., Tufts, University, USA.
   7. Department of Dermatlogy, University of Dundee, UK
   8. Lund Institute of Technology, Sweden
   9. Linkoping University, Sweden
   10. King Faisal Specialist Hospital & Research Centre
   11. King Saud Medical Complex and KKUH, Riyadh
   12. Riyadh Military Hospital
   13. Prince Noura center on prostate Cancer, KKUH

**P R O F E S S I O N A L E X P E R I E N C E(25 years) 1993-2018**

**Associate Professor**

Physics and Astronomy Department, College of Science, King Saud University, Riyadh, Saudi Arabia.

**Since May 2015**

**Assistant Professor**

Physics and Astronomy Department, College of Science, King Saud University, Riyadh, Saudi Arabia.

Since 2010

**Senior Scientist**

National Institute of Lasers and Optronics (NILOP), Islamabad.

2007-2018

**Tenure Track Assistant Professor**,

**Department of Physics and Applied Mathematics**,

Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.

2006-2007

**Research Assistant & Research Associate**

Department of Physics University of Hull, UK.

2001-2005

**Senior Scientific officer**

Pakistan Institute of Lasers & Optics Rawalpindi

1998-2001

**Scientific officer**

Pakistan Institute of Lasers & Optics, Rawalpindi

1996-1998

**Research Officer**

Infaq Foundation M.Phil (Physics) project

1993 to 1995

**Research Scholar**

Department of Physics, University of Agriculture, Faisalabad.

1991- 1993

**U N I V E R S I T Y T E A C H I N G A N D R E S E A R C H E X P E R I E N C E (25 years) 1993-2019**

1. Teaching General Physics Course (Physics-145, 103, 104, 105) to undergraduate in the Department of Physics and Astronomy, King Saud University, Riyadh Saudi Arabia.
2. Teaching Laser and its Application to undergraduate/graduate level at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
3. Teaching Laser Application in Medicine to PhD students at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
4. Teaching biomedical optics to PhD students at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
5. Teaching Laser Application in Medicine to PhD students at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
6. Teaching Laser Scanning Confocal Microscopy to PhD students at National Institute of Lasers and Optronics (NILOP), Islamabad.
7. Teaching Photo diagnosis and Photodynamic Therapy to PhD students at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
8. Postgraduate Laboratory Demonstrator of Level 2 in the Department of Physics University of Hull, UK.
9. Postgraduate Laboratory Demonstrator Level 3 in the Department of Physics University of Hull, UK.
10. General Physics Courses to undergraduates at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
11. Supervisor of one PhD student and one masters student at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
12. Co-supervisor of five Masters student at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
13. Co-supervisor of one PhD student at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
14. Research Adviser and facilitator for two PhD student for research publications at Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad.
15. Delivered 20 seminars at national and international forums.
16. Attended 10 conferences at national and international levels.
17. Organized 02 international conferences.
18. Optical Biopsy of Breast cancer tissue. Varieties of optical methods are used currently for the early detection of breast cancer. They include Fluorescence Emission Spectra (FES) and Synchronous Fluorescence Spectra (SFS) a very promising technique due to its simplicity and reasonable reliability.
19. Discovery of lung cancer biomarker by synchronous fluorescence excitation spectroscopy of blood plasma and sputum.
20. Detection and diagnosis of Prostate Cancer by autofluorescence analysis of certain set of biomarkers in urine
21. Methods to differentiate benign from the malignant tissue and also to do spectral grading of malignancy similar to Gleason Index.
22. Development of bio-nano particle in process
23. Significant contribution to the development of Biophotonics/Microscopy Laboratory at PIEAS & NILOP.
24. Preclinical and clinical evaluation of photosensitizers for photodynamic therapy.
25. Study of the light dosimetry and of the tissue optical properties.
26. Clinical detection of early cancers by fluorescence imaging during endoscopy.
27. Study of the histological and cellular localization of drugs by fluorescence microscopy.
28. Development of instrumentations for the endoscopic detection of early superficial cancers and for their treatment by photodynamic therapy.
29. Study to obtain fluorescence lifetime images in real time and endoscopically in the frequency domain.
30. Study to measure the fluorescence quantum yield of fluorophores in biological tissues.
31. Cellular level fluorescence photobleaching, studied using a micro-spectroscopic technique with 410 nm laser radiation.
32. Preclinical study of the fluence rate effects upon photosensitizer photobleaching.
33. In vitro studies of the photosensitizer concentration effects on photobleaching using fluorescence microscopy.
34. Two photon excited fluorescence and preliminary tests of PDT treatment of cells using trains of ~ 130 fs duration pulses from a Titanium Sapphire laser emitting at ~ 800 nm.
35. Research Associate at Yorkshire laser centre, Goole Hospital UK. Clinical sessions attended and familiarised myself with.
36. The principles of Fluorescence Bronchoscopy as used for the detection of Bronchopulmonary Cancer.
37. Endoscopic Photodynamic Therapy.
38. Spectroscopy Experiments Installed and coupled dye laser with Excimer laser. Aligned and run the dye laser and found performance is satisfactory.
39. Performed photo-ionization experiment, sodium vapor irradiated by a laser pulse in atomic beam apparatus and recorded the spectra of sodium atoms in the range of 580 to 590 nm.
40. Installation and alignment of all the parts of the vacuum chamber including electron gun.
41. Assembling of Vacuum SystemA complete new vacuum system has been assembled to attain the vacuum in the range 1x10-7mbar. Different parts like trolley, reducers, couplers, adapters and nozzles have been designed and fabricated for the new vacuum system.
42. Designing of 6 kW electron gunDesigning and development of the various parts for the 6 kW electron gun including cathode assembly, anode assembly and cooling unit.

**Book Published**

* Laser Induced Effects, 2010, Lap Lambert Publishing, Germany
* Book Chapter Zinc Oxide Nanostructures : Advances and Applications 2013

by Pan Stanford Publishing

ZnO nanostructures toxicity and phototoxicity characteristics towards biological samples; M. Willander, O. Nur, M. Fakhr-e-Alam, M. Atif, and M. S. AlSalhi

**C O M P U T E R S K I L L S**

1. Mat lab,
2. Lab view,
3. Windows XP,
4. Windows NT,
5. MS Office,
6. Math Cad,
7. Microcal Origin,
8. Word 97,
9. Microsoft Excel,
10. Paint Shop Pro V6,
11. Power Point XP.

**P U B L I C A T I O N S**

1. Spectral diagnosis of the blood disorders M. S. AlSalhi, M Atif, V. Masilamani, Naveed, Tahir (Paper) (In preparation)
2. Photovoltaic and capacitance measurements of Al-doped CdS (QD)/TiO2 and its application in solar cell devices, W.A. FAROOQ, M. ATIF, A. FATEHMULLA, I.S. YAHIA, M. S. AlSalhi (submitted)
3. M. S. AlSalhi. Muhammad Hammad Aziz, , Mahvish Fatima, Fozia Shaheen, M. Atif, S. D. Devanesan, Evaluation of NiO Nanoparticles for Photodynamic Therapy of Cancer Cells *in vitro (Resubmissions after corrections)*
4. M. Atif, M. S. AlSalhi, S. Devanesan, V. Masilamani, K. Farhat, Mashael AlShebly, Ijaz Hussain Preliminary Study of breast cancer detection from the spectra of Body Fluids *(IRB and Submitting again)*
5. MS AlSalhi, V Masilamani, Nasser alarif, W Aslam Farooq, M. Atif, Shahid Ramay, Hayat Saeed Althobaiti, Saqib Anwar,Ibrahim elkhedr, Bassam A. Abuamarah, Elemental composition of massive meteorite of Saudi empty quarter (submitted)
6. **M. Atif**, Saqib Anwar, W. A. Farooq, M. Ali, Bassam A. Abuamarah, M. S. AlSalhi, V. Masilaimani, Study of the composition, mechanical and magnetic properties of Saudi meteorite (submitted)
7. WA Farooq, Elsayed Elgazzar, A Dere, O Dayan, Z Serbetci, Abdulkerim Karabulut, M Atif, Atif Hanif, (2019) Photoelectrical characteristics of novel Ru(II) complexes based photodiode Journal of Materials Science: Materials in Electronics, 1-10. https://doi.org/10.1007/s10854-019-00845-9.
8. Seemab Iqbal, Muhammad Fakhar-e-Alam, N. Amin, M. Ismail, G. Mustafa , M. Raza Ahmad, **M. Atif** (2019) Synthesis and study of structural, morphological, optical, and toxicological properties of ferromagnetic cobalt oxide nanoparticles in liver carcinoma cell line International Journal of Materials Research efirst 146.111759.
9. M. S. AlSalhi, Wadah Tashish, Safaa Saleh Al-osaif, **M. Atif** (2019) Effects of He-Ne laser and argon laser irradiation on growth, germination, and physico-biochemical characteristics of wheat seeds (Triticum aestivum L.) Laser Physics 29, 015602.
10. [Seemab Iqbal](https://www.mdpi.com/search?authors=Seemab%20Iqbal&orcid=0000-0002-9976-4726), [Muhammad Fakhar-e-Alam](https://www.mdpi.com/search?authors=Muhammad%20Fakhar-e-Alam&orcid=), [**M. Atif**](https://www.mdpi.com/search?authors=M.%20Atif&orcid=),[Nasar Ahmed](https://www.mdpi.com/search?authors=Nasar%20Ahmed&orcid=), [Aqrab -ul-Ahmad](https://www.mdpi.com/search?authors=Aqrab%20-ul-Ahmad&orcid=), [N. Amin](https://www.mdpi.com/search?authors=N.%20Amin&orcid=),[Raed ahmed Alghamdi](https://www.mdpi.com/search?authors=Raed%20%20ahmed%20Alghamdi&orcid=), [Atif Hanif](https://www.mdpi.com/search?authors=Atif%20Hanif&orcid=)7and [W. Aslam Farooq](https://www.mdpi.com/search?authors=W.%20%20Aslam%20Farooq&orcid=) (2019) Empirical Modeling of Zn/ZnO Nanoparticles Decorated/Conjugated with Fotolon (Chlorine e6) Based Photodynamic Therapy towards Liver Cancer Treatment, Micromachines 10(1), 60; <https://doi.org/10.3390/mi10010060>
11. V Masilamani, Nasser alarif, W Aslam Farooq, **M. Atif**, Shahid Ramay, Hayat Saeed Althobaiti, Saqib Anwar,Ibrahim elkhedr, MS AlSalhi, Bassam A. Abuamarah (2019) Physical characteristics of the massive meteorite of Saudi empty quarter Proceedings of the 1st Springer Conference of the Arabian Journal of Geosciences Petrogenesis and Exploration of the Earth’s Interior 75-78 https://doi.org/10.1007/978-3-030-01575-6\_18 .
12. **M. Atif**, Saqib Anwar, W. A. Farooq, M. Ali, V. Masilaimani, M. S. AlSalhi, Bassam A. Abuamarah, Study of the composition, mechanical and magnetic properties of Saudi meteorite, (2019) Proceedings of the 1st Springer Conference of the Arabian Journal of Geosciences Petrogenesis and Exploration of the Earth’s Interior 79-81 https://doi.org/10.1007/978-3-030-01575-6\_19.
13. WA Farooq, Walid Tawfik, **M Atif**, MS Alsalhi, HY Zahran, AF Abd El-Rehim, IS Yahia, Sarfraz Mansoor (2018) [Evaluation of laser Induced Breakdown Spectroscopy for analysis of annealed Aluminum Germanium alloy at different temperatures](http://iopscience.iop.org/article/10.1088/1757-899X/383/1/012012/meta), IOP Conference Series: Materials Science and Engineering 383 (1), 012012.
14. **M. Atif**, A. Ali, MS AlSalhi and M. Willander (2018) [Effect of Urea on the Morphology of Fe**3**O**4** Magnetic Nanoparticles and Their Application in Potentiometric Urea Biosensors](https://link.springer.com/article/10.1007/s12633-018-9935-8), Silicon 1-6 <https://doi.org/10.1007/s12633-018-9935-8>.
15. **M. Atif**, Mohamad  AlSalhi, S Devanesan, Vadivel Masilamani,  
    Karim Farhat, Danny Rabah A Study for the Detection of Kidney Cancer Using Fluorescence Emission Spectra and Synchronous Fluorescence Excitation Spectra of Blood and Urine (2018), Photodiagnosis and photodynamic therapy 23, 40-44.
16. Muhammad Waseem Akram, Muhammad Fakhar e Alam, **M. Atif**, Alvina Rafique Butt, Ali Asghar, YasirJamil, Khurram Saleem Alimgeer, Zhiming Wang (2018) In vitro evaluation of the toxic effects of MgO nanostructure in Hela cell line Scientific Reports 8; 4576.
17. Saima Muzammil, Sumreen Hayat, Muhammad Fakhar-e-Alam, Bilal Aslam, Muhammad Hussnain Siddique, Mhammad Atif Nisar, Muhammad Saqalein, **Muhammad Atif**, Ayesha Sarwar, Anwaar Khurshid, Nasir Amin, Zhiming Wang (2018), Nanoantibiotics: Future nanotechnologies to combat antibiotic resistance Frontiers In Bioscience, Elite 10(2), 352-374.
18. Shumaila Javeed, Khurram Saleem Alimgeer, Wajahat Javed, **M. Atif**, Mueen Uddin (2018) A modified artificial neural network based prediction technique for tropospheric radio refractivity Plos One 13(3), e0192069.
19. Muhammad Hammad Aziz, Mahvish Fatima, Syed Mansoor Ali, **M. Atif**, Zobia Noreen, Imran Ahmad, Fozia Shaheen, Akbar Ali, M. R. Baig, Hafeez Ullah, Ghazanfar Abbas, and Turki S. ALkhuraiji (2018) [In Vitro Cytotoxicity of Magnetic Spinel Nanoferrites (CoMgFe2O4) Against HepG2 Cells](http://www.ingentaconnect.com/contentone/asp/jno/2018/00000013/00000002/art00016) [Journal of Nanoelectronics and Optoelectronics](https://www.google.com.sa/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB4QFjAA&url=http%3A%2F%2Fwww.aspbs.com%2Fjno.htm&ei=C-vIVMivG4KuUcC9ggg&usg=AFQjCNF1bgZ7bchohYi2TtMvXE7BlqeoFQ&sig2=ngfLZd3xR4mb3KEfOBWvjg) 13(2): 251-57.
20. F. Shaheen, M. Hammad Aziz, M. Fakhar-e-Alam, **M. Atif**, M. Fatima, R. Ahmad, A. Hanif, S. Anwar, F. Zafar, G. Abbas, S.M. Ali, M. A Ahmed, (2017) [In Vitro Study of the Photodynamic Effectiveness of GO-Ag Nanocomposites against Human Breast Cancer Cells](http://www.mdpi.com/2079-4991/7/11/401), Nanomaterials, 7 (11), 401.
21. Saleh A. Eifan, Atif Hanif, Sameera Mohammed AlJohani, **Muhammad Atif** (2017), [Respiratory Tract Viral Infections and Coinfections Identified by Anyplex™ II RV16 Detection Kit in Pediatric Patients at a Riyadh Tertiary Care Hospital](https://www.hindawi.com/journals/bmri/2017/1928795/abs/), BioMed Research International Article ID, 1928795.
22. [Muhammad Fakhar-e-Alam](https://www.nature.com/articles/srep46603#auth-1), [M. Waseem Akram](https://www.nature.com/articles/srep46603#auth-2), [Seemab Iqbal](https://www.nature.com/articles/srep46603" \l "auth-3), [K. S. Alimgeer](https://www.nature.com/articles/srep46603#auth-4), [**M. Atif**](https://www.nature.com/articles/srep46603#auth-5), [K. Sultana](https://www.nature.com/articles/srep46603#auth-6), [M. Willander](https://www.nature.com/articles/srep46603#auth-7) & [Zhiming M. Wang](https://www.nature.com/articles/srep46603" \l "auth-8), Empirical Modeling of Physiochemical Immune Response of Multilayer Zinc Oxide Nanomaterials under UV Exposure to Melanoma and Foreskin Fibroblast Scientific Reports 7, Article number: 46603 (2017)
23. **M Atif** (2016), Measurement of photoionization cross section from sodium organo-opto-electronics 2(1), 15-20.
24. Akbar Ali, Mukhtar Ahmad, Majid Niaz Akhtar, Saleem Farooq Shaukat, Ghulam Mustafa, **M. Atif** and W. A. Farooq (2016), Magnetic nanoparticles (Fe3O4 & Co3O4) and their applications in urea biosensing: A review, Russian Journal of Applied Chemistry 89(4), 517-534.
25. **M. Atif**, Muhammad Fakhar-e-Alam, Najeeb ABBAS, Maqsood A. Siddiqui, Anees A. Ansari, Abdulaziz A. Al-Khedhairy and Zhiming M. Wang (2016) In-vitro cyto-toxicity of luminescent functionalized mesoporous SiO2@Eu(OH)3 core-shell microspheres in MCF-7 Journal Of Nanomaterials Article ID 7691861.
26. Muhammad Fakhar-e-Alam, M. U. Farooq, Najeeb Abbas, Seemab Iqbal, Nasir Amin, Muhammad Hammad Aziz, **M. Atif**, W. A. Farooq, R. Suleman, S.S.Z. Zaidi (2016) Pharmacokinetics and bio distribution of nickel oxide for liver cancer cure JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS 18(3-4), 414-418.
27. W. A. Farooq, **M. Atif**, F. Yakuphanoglu, Amanullah Fatehmulla (2016) Fabrication and Electrical Characterization of Cds quantum dots based solar cell OPTOELECTRONICS AND ADVANCED MATERIALS – RAPID COMMUNICATIONS 10(3-4), 154-158.
28. **M. Atif,** M. ZELLWEGER, G. WAGNIÈRES (2016) Review of the role played by the photosensitizer's photobleaching during photodynamic therapy JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS 18(3-4), 338-350.
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119. M. Ikram, R. Khan, S. Firdous, **M. Atif**, M. Nawaz (2011) Photodynamic Therapy of Non-Melanoma Skin Cancers Laser Physics 21(2), 427-433.
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122. Hafeez-Ullah, **M. Atif**, S. Firdous, M.S Mehmood, M. Ikram, C. Kurachi, C. Grecco, G. Nicolodelli, V. S. Bagnato Femtosecond light distribution at skin and liver of rats: analysis for use in optical diagnostics *Laser Physics Letters* *Volume 7(12) 889-898 (2010).*
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133. **M Atif** (2008) “In Vitro studies of the fluorescence changes during Photodynamic Therapy” College on Micro and Nano photonics for life Sciences ICTP, Trieste Italy.
134. **M Atif** (2007) “Fluorescence dynamic studies of a PDT photosensitiser ” 12th ESP Congress University of Bath, UK
135. A Rehman, **M Atif** and M Ikram (2007) “Study of Fluence effects in photodynamic therapy using photobleaching model” 6th International Workshop-cum-Training course on Microelectronics and Nano-Electronics and Photonics, Islamabad.
136. **M Atif** (2006) “PDT photosensitizer concentration effects upon photobleaching dynamics” 6th International Symposium on photodynamic diagnosis and therapy in clinical practice, Italy.
137. **M Atif** (2000)“A study of Sodium Spectrum using atomic beam apparatus.” Frontiers of Physics, 20-22, Government College, Lahore.
138. **M** **Atif** and M A Baig (1998) “Use of two step laser excitation for studying sodium spectrum” Frontiers of Physics, 19-23, Quaid-I-Azam university, Islamabad.
139. **M Atif** andR A Khan (1993) ‘Fabrication and performance study of digital anemometer’ Journal of the University of Agriculture.

**MS / MPHIL/PhD T H E S I S/RESEARCH PUBLICATIONS S U P E R V I S I O N**

1. Photosensitizer’s Dynamics Studies in Different Biological Samples using Laser Irradiation, 2011 Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad (completed)
2. Study of the efficacy of photodynamic therapy and nano particles as a drug delivery vehicle 2012 Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad (Completed)
3. Imaging of biological tissues using diffuse reflectance and optical coherence tomography 2012 Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad (Completed)
4. Laser diagnostics and simulation of different biological samples 2011 Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad (In Progress)
5. Study of the efficacy of Phtotfrin® mediated photodynamic therapy on human Rhabdomyosarcoma cell line (RD) 2011 Hazara University, Mansehra (completed)
6. Monte Carlo Simluation of Laser light through human tissue. 2009 Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad (completed)
7. Invitro studies at the cellular level using laser radiation 2008 Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad (completed)
8. Photodiagnostics study of biological tissues 2008 Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad (completed)
9. Study of Fluence effects in photodynamic therapy using photobleaching model 2007 Pakistan Institute of Engineering and Applied Sciences (PIEAS), Islamabad (completed)
10. Photodynamic activity in Glioma cells 2011 Federal Urdu University of Arts, Science and Technology Islamabad (completed)

**MS / MPHIL/PhD T H E S I S R E V I E W E D AT K I N G S A U D U N I V E R S I T Y**

1. SPECTRAL DISCRIMINATION BETWEEN BENIGN AND MALIGNANT BREAST TUMORS By REEM KHALID SULAIMAN AL-DAKHEEL

**R E S E A R C H G R A N T S**

1. Principal Investigator of the project Laser Applications, Dean of Scientific Research, King Saud University Riyadh (2013) 0.15 Million
2. Member of the team of the project Bio-material characterization with lasers and Photodynamic therapy, PIEAS Pakistan (2007) 2 Million
3. Member of the NPST project Highly Efficient Quantum Dots Sensitized Solar Cells (QDSSCs) Based on Nano-Metal Oxide  Semiconductors - 2 Million (2015)

**C O N F E R E N C E S/T R A I N I N G A T T E N D E D**

1. **Presented one paper, FACSS Presents SciX 2015 Rhode Island Convention Center** **Providence, Rhode Island USA,** Discrimination of polymers from plasma parameters using laser Induced Breakdown spectroscopy
2. **Presented two papers, NaNoNG-2015**which will be held at Antalya, Sherwood Club Kemer, TURKEY
   * Cytotoxic Effects of Magnetic Spinel Ferrites Nanoparticles in HepG2 cellular Model for Cancer Cure
   * Characterization of Multi-Layered TiO2-ZnO-TiO2 Nano-structured Thin Film Prepared by Sol-Gel Spin Coating System.
3. **Presented a paper,** Aqueous Synthesis, Characterization and Interaction of CdS Quantum Dots with denatured Bovine Serum Albumin, The first international conference on nanotechnology & its application (ICNA ( I ) - 2014) 25 - 28 February 2014 (Qena – Luxor) – **Egypt**
4. **Presented a paper,** Advanced School of Biophotonics for Diagnosis and Treatment of Cancer and Microbial Control, 11-19 April 2013 Brazil
5. **Presented a paper**, twenty first annual International Laser Physics Workshop (LPHYS'12) took place from July 23 to July 27, 2012, in the city of Calgary, Canada, in the Hotel Hollywood, Congress Center, and University of Calgary, Calgary, Canada.
6. Member of the organizing committee of the Workshop on the effective use of Spectroscopy 4-7 April King Saud University Riyadh Saudi Arabia 2012.
7. KAUST-UCSB-NSF Workshop on Solid-State Lighting. February 13-14,   
   King Abdullah University of Science & Technology. Thuwal Saudi Arabia 2012.
8. **Presented a paper** in IEEE Conference on Electronics, Communication and Photonics KACST, Riyadh Saudi Arabia 2011
9. **Presented a paper**, The twentieth annual International Laser Physics Workshop (LPHYS'11) will be held from July 11 to July 15, 2011, in the city of Sarajevo, Bosnia
10. Member of the organizing committee 35th International Nathiagali Summer College Islamabad Pakistan 2010
11. University College London, 2010 Biophotonics UK
12. Confocal Laser Scanning Microscopy Training at Jena, 2009, Germany
13. **Presented a paper**, College on Micro and Nano photonics for life Sciences ICTP, Trieste, 2008 Italy.
14. **Presented a paper**, 12th ESP Congress University of Bath, 2007 UK
15. **Presented a paper**, International Symposium on photodynamic diagnosis and therapy in clinical practice, October 2006, Italy.
16. **Presented a paper**, Joint International Laser conference, September 2003**,** Edinburgh, Scotland.
17. Lasers in Medicine, June 2001, International Congress Center Munich Germany.
18. **Presented a paper**, Eighth Symposium on Frontiers of Physics, November 2000, Government College, Lahore.
19. **Presented a paper**, Seventh Symposium on Frontiers of Physics, November 1998, Quaid-I-Azam University, Islamabad.
20. Comstech-Nist workshop on new trends and breakthroughs in solar energy research, August 1994, Islamabad, Pakistan.
21. Third International Symposium on Advanced materials, September 1993, Islamabad.

**Reviewer of the following journals**:

1. **Optik - International Journal for Light and Electron Optics**
2. **Applied Optics-OSA**
3. **Materials Chemistry and Physics**
4. **Silicon**
5. **Photodiagnosis and Photodynamic Therapy**
6. **Applied Surface Science**
7. **Journal of Optoelectronics and Advanced Materials**
8. **Materials Science in Semiconductor Processing**
9. **Current Nanoscience**
10. **Journal of Saudi Chemical Society**
11. **Engineering Science and Technology: an International Journal**
12. **Journal of Photochemistry and Photobiology B: Biology**
13. **Journal of Nanoparticle Research**
14. **Photochemistry and Photobiology**
15. **Photomedicine and Laser Surgery**
16. **Chinese Optics Letters**
17. **Frontier in Biosciences**