

## DR. AJAB KHAN KASI

Department of Physics, University of Balochistan, Quetta 87300,  
Pakistan

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[ajabkasi@gmail.com](mailto:ajabkasi@gmail.com)



### Honors

Orient Dr. Abdul Qadeer Khan Science Award (Gold Medal)

University of Balochistan Gold Medal

Five US Patents

Best paper award in International conference on innovation challenges in multidisciplinary research and practice (ICMRP 2013), Malaysia

Best Paper award in 3M-Nano 2013 conference , China

Best Paper award in 2nd Annual Computational Science Conference2013, International Islamic University, Islamabad, Pakistan

Best presentation award in International Scientific Spring 2016 Islamabad

Satha Invention to Innovation award 2016

First position in Department of Physics, University of Balochistan, Pakistan

### Education

Asian Institute of Technology, Pathumthani , Thailand

**Ph. D. inMechatronics** **2012**

Dissertation : “ Fabrication of anodic aluminum oxide (AAO) based minidialyzer for hemodialysis device”

Overall GPA : 3.54

Honors: Ph. D completed with 11 Journal Papers

Balochistan University of Engineering Information Technology and management sciences  
Quetta, Pakistan

**MS in Semiconductors Physics2008**

Research: “ Smart home system with four user interface ”

Overall GPA: 3.1

University of Balochistan, Quetta , Pakistan

**PGD in Computer Science**

**2002**

Overall GPA: 3

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University of Balochistan , Quetta , Pakistan

**M.Sc in Physics**

**2001**

Areas of Concentration: Electronics

Overall Percentage: 68%

Honors: 1st Position

### PRESENT POSITION

**Chairperson Physics Department, University of Balochistan, Quatta**

### TEACHING EXPERIENCE

University of Balochistan, Quetta

Associate Professor-Physics Aug 2015- till date

University of Balochistan, Quetta

Assistant Professor-Physics Oct 2012 - Aug 2015

University of Balochistan, Quetta

Lecturer - Physics Aug 2004 - Oct 2012

SardarBahadur Khan Women's University, Quetta, Pakistan

Lecturer (Visiting) Apr 2006 - Jul 2008

Preston University, Pakistan

Lecturer (Visiting) Apr 2002 - Jul 2004

Iqra University, Pakistan

Lecturer (Visiting) Feb 2003 - May 2007

Balochistan University of Information Technology and management Sciences

Lecturer (Visiting) Apr 2006 - July 2008

AlkhairUnversity, Pakistan

Lecturer (Visiting) Apr 2001 - July 2006

Govt Science college Quetta, Pakistan

Lecturer (Visiting) Apr 2003 - July 2006

Govt Girls college Quetta, Pakistan

Lecturer (Visiting) Apr 2003 - July 2006

Path Finder Informatics, Quetta, Pakistan

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Lecturer (Visiting) Aug 2000 - July 2002

Pearl Institute of Information Technology and Management Sciences  
Lecturer (Visiting) August 2002 - July 2005

St Francis's Grammar School, Quetta, Pakistan  
Teaching Physics for O level Cambridge 2000 - 2002

### Supervision

Supervisor of 8 MS students and 5 PhD students  
Co-supervisor of 14 MS students and 4 PhD students

### Journal Publications

1. Ajab Khan Kasi, Nitin Afzulpurkar, Jafar Khan Kasi, AdisornTuantranont, and PaweenaDulyaseree, "Utilization of cracks to fabricate anodic aluminum oxide nanoporous tubular and rectangular membrane". Journal of Vacuum Science and Technology: B, 29, Issue. 4 (2011) D1071-D1077. (IF: 1.49)
2. Ajab Khan Kasi, Jafar Khan Kasi, Nitin Afzulpurkar, MahadiHasan, "Bending and Branching of Anodic Aluminum Oxide nanochannels and their applications", Journal of Vacuum Science and Technology-B, Vol.30 Issue. 1, (2012)031805 (IF: 1.48). (IF 1.49)
3. Ajab Khan Kasi, Jafar Khan Kasi, Nitin Afzulpurkar, Erik Bohez, AdisornTuantranont, "Continuous voltage detechement and etching (CVDE) technique for fabrication of nano-porous AAO tubular membrane", Nanoscience and Nanotechnology Letter.Vol. 4 Issue. 5, (2012) 530-536. (IF 1.444)
4. Jafar Khan Kasi, Ajab Khan Kasi, Nitin Afzulpurkar, MahadiHasan,SirapatPratontep, and AmpornPoyai"Fabrications of three dimensional anodic aluminum oxide micro shapes", Nanoscience and NanotechnologyLetters,Vol. 4, Issue 5(2012) 537-543. (IF 1.444)
5. Mahadi Hasan,Ajab Khan Kasi, Jafar Khan Kasi, Nitin Afzulpurkar, "Anodic aluminum oxide (AAO) to AAO bonding and their application for fabrication of 3D microchannel",Nanoscience and Nanotechnology Letters' Vol. 4, Issue. 5(2012)569-573. (IF 1.444)
6. W.A.H.S.S.Wewala, Jafar Khan Kasi, Ajab Khan Kasi, Nitin Afzulpurkar, "Design, simulation and comparison of ascending and descending curvilinear microchannel for cancer cell separation from blood", Biomedical Engineering: Applications, Basis and Communications, Vol. 25, No. 4 (2013) 1350037. (IF 0.23)

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7. Jafar Khan Kasi, Ajab Khan Kasi, MuzamilBokhari and Nitin Afzulpurkar, Fabrication of Zinc Oxide Nanorods based Gas Sensor, World Applied Science Journal (2014), in press. (IF: 0.3)
8. Ajab Khan Kasi, Jafar Khan Kasi, Mahadi Hasan, Nitin Afzulpurkar, SirapatPratontep, SupanitPorntheeraphat, ApirakPankiew, "Fabrication of low cost anodic aluminum oxide (AAO) tubular membrane and their application for hemodialysis", Advanced Materials Research, Vols. 550-553 (2012) 2040-2045
9. Jafar Khan Kasi, Ajab Khan Kasi, WinaddaWongwiriyan, Nitin Afzulpurkar, PaweenaDulyaseree, Mahadi Hasan and AdisornTuantranont, "Synthesis of carbon nanotube and carbon nanofiber in nanopore of anodic aluminum oxide template by chemical vapor deposition at atmospheric pressure", Advanced Materials Research, Vol. 557-559 (2012) 544-549
10. Mahadi Hasan, Ajab Khan Kasi, Jafar Khan Kasi, Nitin Afzulpurkar, SupanitPorntheeraphat, WitsarootSripumkhai, "Fabrication of thinner anodic aluminum oxide based microchannels", Advanced Materials Research, Vols. 550-553 (2012) 2046-2050
11. Jafar Khan Kasi, Ajab Khan Kasi, Nitin Afzulpurkar, Erik Bohez, AmpornPoyai, "Bending behaviour of nanochannels in the edges of anodic aluminum oxide membrane", Advanced Science, Engineering and Medicine, Vol.5 (2013) 1-7
12. W.A.H.S.S.Wewala, Nitin Afzulpurkar, Jafar Khan Kasi, Ajab Khan Kasi, AmpornPoyai, DhananjayW.Bodhale, "Design and simulation of ascending curvilinear micro channel for cancer cell separation from blood", Advanced Materials Research, Vols. 557-559 (2012) 2361-2366
13. Ajab Khan Kasi, W.M. Ashraf, Jafar Khan Kasi, S. Tayyaba, and Nitin Afzulpurkar, "Low cost nano-membrane fabrication and electro-polishing system". World Academy of Science, Engineering and Technology, Vol.64 (2010) 56-58.
14. W.A.H.S.S.Wewala, Jafar Khan Kasi, Ajab Khan Kasi, Nitin Afzulpurkar, "Cell Separation Through Ascending and Descending Curvilinear Microchannels", Applied Mechanics and Materials Vols. 300-301 (2013)1649-1653
15. Jafar Khan Kasi, Ajab Khan Kasi, MuzamilBokhari, Nitin Afzulpurkar, "Synthesis of unique structures of carbon nanotube at anodic aluminum oxide

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template”, Applied Mechanics and Materials Vol. 421 (2013) pp 319-323

16. Muzamil Bokhari, Ajab Khan Kasi, Jafar Khan Kasi, Om Prakash Gujela, Nitin Afzulpurkar, “ Improving Photoelectric conversion efficiency using ZnO/ ZnP composite materials”, International Journal of Nanomaterials.

17. Jafar Khan Kasi, Ajab Khan Kasi and Muzamil Bokhari, Electrochemical Performance of Carbon Nanotube Based Supercapacitor, International Journal of Chemical, Nuclear, Metallurgical and Materials Engineering, 8( 2014) 1343-1346.

18. Muzamil Bokhari, Muhammad Shail, Jafar Khan Kasi, and Ajab Khan Kasi Performance analysis of passive optical networks with energy saving through the integrated sleep mode, Optical Switching and Networking 21, (2016)16-30(IF: 1.07).

19. Muhammad Ayaz, Jafar Khan Kasi, Ajab Khan Kasi, samiullah and Mustafa Ali, “Toward Eco Green Energy: Fabrication of DSSC from Recycled Phone Screen”, The Open Access Journal of Resistive Economics (OAJRE), 2016.

20. Indrani Dakua, Ajab Khan Kasi, Sunandan Baruah, and Nitin Afzulpurkar, “ Novel Electrode for Tapping Energy Generated using Piezotronic Nanocrystals”, Journal of Nanoelectronics and Optoelectronics, Vol. 11, pp. 1-7, 2016. ( IF:0.389)

### CONFERENCE PROCEEDINGS

1. Ajab Khan Kasi, Jafar Khan Kasi and Nitin Afzulpurkar, “New method of fabricating nanoporous anodic aluminum oxide (AAO) tubes”, Physics and chemistry of surface and interface (PCSI-38), San Diego CA, USA, January 16-20, 2011.

2. Jafar Khan Kasi, Ajab Khan Kasi, Nitin Afzulpurkar, Naveed Sheikh, “Protein sensor for the waste dialysate material”, 2nd International Conference on mechanical and electronics Engineering (ICMEE), Kyoto, Japan, August 1-3, 2010.

3. Ajab Khan Kasi, Jafar Khan Kasi , Muhammad Waseem Ashraf, ShahzadiTayyaba, Nitin Afzulpurkar, and AdisornTuantranont, “Two layered novel anodic aluminum oxide nanoporous membrane”, 2nd International Conference on mechanical and electronics Engineering (ICMEE), Kyoto, Japan, August 1-3, 2010.

4. Ajab Khan Kasi, Jafar Khan Kasi, ShahzadiTayyaba, Muhammad Waseem Ashraf, Nitin Afzulpurkar, and AdisornTuantranont, “Fabrication of low cost nano-

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porous anodic aluminum oxide membrane” international conference on automation, Robotics and Control System, Orlando, FL, USA, July 12 - 14, 2010.

5. Ajab Khan Kasi, Muhammad Waseem Ashraf, Jafar Khan Kasi, ShahzadiTayyaba, and Nitin Afzulpurkar, “Low cost nano-membrane fabrication and electro-polishing system”, ICNOP 2010: International Conference on Nanotechnology, Optoelectronics and Photonics, Rome, Italy, April 28- 30, 2010.

6. Ajab Khan Kasi, Jafar Khan Kasi, Nitin Afzulpurkar, Erik Bohez, AdisornTuantranont, BanchongMahaisavariya, “Fabrication of anodic aluminum oxide (AAO) nano-porous membrane on both sides of aluminum sheet”, 2nd International Conference on mechanical and electronics Engineering (ICMEE), Kyoto, Japan, August 1-3, 2010.

7. Ajab Khan Kasi, Jafar Khan Kasi, Nitin Afzulpurkar, Erik Bohez, AdisornTuantranont, BanchongMahaisavariya, “Novel anodicaluminum oxide (AAO) nanoporous membrane for wearable hemodialysis device”, 3rd International Conference on Communications and Electronics (ICCE).NhaTrang, Vietnam, August 11-13, 2010.

8. Muhammad Waseem Ashraf, ShahzadiTayyaba, Nitin Afzulpurkar, Ajab Khan Kasi, AsimNisar, and Jafar Khan Kasi, “MEMS based biomedical microfluidic device” International Conference on Automation, Robotics and Control System, Orlando, FL, USA, July 12 - 14, 2010.

9. ShahzadiTayyaba, Muhammad Waseem Ashraf, Nitin Afzulpurkar, Ajab Khan Kasi, and Jafar Khan Kasi“Design, analysis and simulation of MEMS based polymeric piezoelectric actuator for drug delivery device” International Conference on Automation, Robotics and Control System, Orlando, FL, USA, July 12 - 14, 2010.

10. Ajab Khan Kasi, Jafar Khan Kasi, “Actuation of robotic arm through artificial muscles and feedback network”, 2nd Annual computational Science conference, International Islamic University, Islamabad, Pakistan. October 20-25, 2013.

11. SamiullahTareen, Ajab Khan Kasi, Jafar Khan Kasi, “Actuation of robotic leg through human leg motion sensing using microcontroller”, 2nd Annual computational Science conference, International Islamic University, Islamabad, Pakistan. October 20-25, 2013.

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### Patents

**1: US PATENT Publication No.** US 2014/0202868 A1, **Title:** “System and method of anodized aluminum oxide nano-porous membrane preparation” **Filing date:** 23 JANUARY 2013, **Publication Date:** Jul. 24, 2014 **Inventors:** Nitin Afzulpurkar, Ajab Khan Kasi, **Original Assignee:** Asian Institute Of Technology

**2: US PATENT PUBLICATION No.** US 2014/0202950 A1, **Title:** “Anodized aluminum oxide tubular nano-porous membrane module and method of manufacture thereof”. **Filing date:** 23 JANUARY 2013, **Publication Date:** Jul. 24, 2014, **Inventors:** Nitin Afzulpurkar, Ajab Khan Kasi, **Original Assignee:** Asian Institute Of Technology

**3: US PATENT PUBLICATION No.** US 2014/0202952 A1, **Title:** “Multilayer anodized aluminium oxide nano-porous membrane and method of manufacture thereof”, **Filing date:** 23 JANUARY 2013, **Publication Date:** Jul. 24, 2014, **Inventors:** Nitin Afzulpurkar, Ajab Khan Kasi, **Original Assignee:** Asian Institute Of Technology

**4: US PATENT PUBLICATION No. 20140272280 A1, Title:** “Anodized aluminum oxide nanoporous membrane integrated with micro-channel and method of formation thereof. **Filing date:** 18th March 2013, **Publication date:** Sep 18, 2014, **Inventors:** Nitin Afzulpurkar, Ajab Khan Kasi. **Original Assignee:** Asian Institute Of Technology

**5: :US PATENT PUBLICATION No. 2014/0332392A1, Title:** “Anodized Aluminum Oxide Template Enabled nanostructure Formation And Method Thereof”, **Filing date:** 7 MAY 2013, **Publication Date:** Nov 13, 2014, **Inventors:** Nitin Afzulpurkar , Ajab Khan Kasi, **Original Assignee:** Asian Institute Of Technology

### BOOKS

1) Jafar Khan Kasi, Ajab Khan Kasi, Nitin Afzulpurkar, “Protein sensor for the waste dialysate” (2013), LAP LAMBERT Academic Publishing, Saarbrücken, GERMANY

2) Jafar Khan Kasi, W.A.H.S.S. Wewala, Ajab Khan Kasi, “Cancer Cell Separation Through Curvilinear Channel” (2013), LAP LAMBERT Academic Publishing, Saarbrücken, GERMANY.

3) Jafar Khan Kasi, Ajab Khan Kasi and Nitin Afzulpurkar, “Characterizations and Applications of Anodic Aluminum Oxide Membrane For Fabrication of Three Dimensional Microstructures” (2016), LAP LAMBERT Academic Publishing, Saarbrücken, GERMANY

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### LANGUAGES

English - Speak fluently and Read / Write with high proficiency

Urdu - Native Language

Pashto - Mother Language

### REFERENCE

#### **Dr. Nitin V Afzulpurkar**

Associate Professor, Mechatronics FoS

Dean, School of Engineering & Technology,

Asian Institute of Technology (AIT),

Pathumthani, Thailand

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