Aadil Shah

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## OBJECTIVE

Hard working and Motivated Research Assistant with a master’s degree, aims to secure a prestigious PhD scholarship that will provide me with the opportunity to pursue advanced research in Material science at a globally renowned university.

**ACADEMIC DETAILS**

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| --- | --- | --- | --- |
| **Degree/Course** | **Institution** | **Year of Passing** | **Percentage / Grade** |
| Master of science in Materials engineering | Pakistan Institute of engineering and applied sciences (PIEAS) | 2022 | 3.46/4.00 |
| Bachelor of science in Material engineering | Ghulam Ishaq Khan Institute of engineering sciences and technology | 2019 | 3.62/4.00 |
| Intermediate (Fsc. Pre- Engineering) | Afridi Model College | 2015 | 78.27% |
| Matriculation | Afridi Model School | 2013 | 88.66% |

# WORK EXPERIENCE

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| **Organization** | **Designation** | **Duration** |
| Ghulam Ishaq Khan Institute of engineering sciences and technology | Lab Engineer and Teacher Assistant | Oct 2019 - Nov 2020 |

**Roles**

* Teaching Introduction to Materials Engineering Lab to 110+ freshmen students
* Managed and instructed labs of Electron Microscopy, Mechanical Testing, Metallography, Heat Treatment, and Powder Metallurgy
* Acquired hands-on experience with metal and polymer manufacturing processes: Injection molding, additive manufacturing, powder metallurgy, sputter deposition and casting.
* Acquired hands-on experience with mechanical testing of engineering materials: Tensile, compression, fatigue, creep & hardness.
* Operated, maintained and troubleshooted a Philips X-ray Diﬀractometer for the structural identification of engineering materials.
* Acquired hands-on experience with GAMRY instrument, Vacuum Oven, Box furnace, centrifuge and Sonicater.

## PROJECT DETAILS

### Fabrication and Characterization of Copper/Graphene Nanocomposite Film by Electrochemical co-deposition for Analysis of Electrical Properties

### Fabricated pure copper and copper/graphene composite films for analysis of potential application in batteries and supercapacitors.

### Results showed more than two times increase in capacitance than pure copper electrode with increased lifetime and corrosion resistance.

### Learnt and applied various characterization techniques i.e., Cyclic Voltammetry, Electrochemical Impedance Spectroscopy Project funded by Higher Education Commission (HEC), Pakistan

### Investigation of Nanograss formation and its removal to fabricate ordered nanotubes for photocatalytic application.

### Ti-NTs are synthesized by modified three-step anodization method. Nanograss and interface acts as defects and reduces its efficiency.

### Photocatalysis efficiency via dye degradation was tested and found that the single layer sample without nano grass and interface shows better efficiency.

### Green synthesis of silver nanoparticles in aloe vera plant extract prepared via a hydrothermal method.

### Silver nitrate was reduced in an aloe vera plant-extract solution under a hydrothermal condition.

### Aloe vera plant extract solutions were used as both reducing and stabilizing agents. Fine spherically shaped nanoparticles were obtained.

### Development and Characterization of Electro-less Nickel-Phosphorous coating on Al 7075-t6 substrate for aerospace application

### Electroless Ni-P coating was developed from a bath using sodium hypophosphite as a reducing agent and Nickel Chloride as a source of Nickel ions.

### The Ni-P coating displays homogeneous, smooth morphology with spherical grains structure.

### The Ni-P coated samples have a high corrosion and wear resistance compared to uncoated samples.

### Phase identiﬁcation, microstructure analysis of NiTi shape memory alloy

### Microstructure analysis of equi-atomic NiTi shape memory alloy and to find the varies parameters that affect the properties of this alloy.

### Computer Aided Design of Crankshaft

### Designed a Crankshaft using Creo and analyzed the design for stress concentration using ANSYS.

### Precipitation Hardening of Aluminum-copper alloy.

### Strengthening of Al-Cu alloy using precipitation Hardening technique and to determine the effect of aging temperature and Aging time on the hardness of precipitation hardening aluminum-copper alloy.

## ONLINE COURSES

### Graphene Science and Technology

### Chalmers University of Technology, Sweden, on edX Writing

### Scientiﬁc Papers and Making Presentations in English

* Tsinghua University, China, on edX

### Nanotechnology - A Makers Course

### Duke University, North Carolina State University & The University of North Carolina at Chapel Hill Coursera

### Physics of silicon solar cells

### Taught by: PR. Bernard Drevillon, Professor at Ecole Polytechnique

### Absolute Beginners Guide to CFD simulation in ANSYS

### Taught by: Sijal Ahmed (CFD Engineer, CFD Instructor), on Udemy

### Data Visualization in Excel: All Excel Charts and Graphs

### Start-Tech Academy on Udemy

**SKILLS**

* Project Management
* Time Management.
* Leadership
* Adaptability
* PTC Creo

**HONOURS AND AWARDS**

* Dean's Honor list (GPA equal or exceed 3.50), college of Engineering Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019
* Awarded FATA Merit scholarship worth 600,000 Pkr (5,000 USD) for four years studies at bachelor’s level
* Secured all FATA 1st and all KPK 17th position in ETEA Test 2015
* University Silver Medal for highest academic standing at the undergraduate level int he Faculty of Material Science

**CERTIFICATIONS**

* Awarded certificate of Participation for attending the webinar on Introduction to welding procedures qualification for industrial applications
* Awarded certificate of Participation for best performance in MOLFREASHHH 2018
* Awarded certificate of Participation for attending one day short seminar on Photo- lithography
* Awarded certificate of Appreciation for donating blood three times in Blood donation camp.
* Awarded Certificate of Participation for attending First Aid Training, arranged by Pakistan Red Crescent Society

**NETWORKS AND MEMBERSHIPS**

* Member, American society of materiel (ASM)
* Event coordinator, Team Green Energy development (Team GED)
* Head of Education department, Bara Educational society (BES)
* Afridi model college |Cricket team captain
* Campus ambassador for Youth Intellects Society (YIS)

**REFERENCE**

## Available upon request