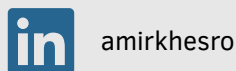


Dr Amir Khesro

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UK Global Talent Visa Recipient
(Do not require sponsorship)

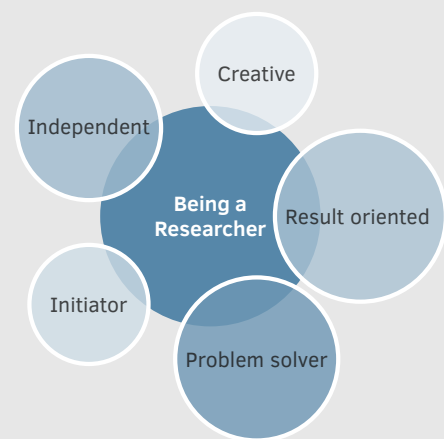
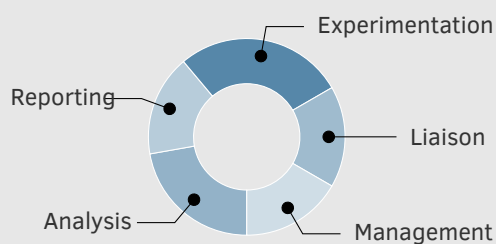
Social Network



About Me

I'm passionate about tackling research challenges and crafting solutions. I strategically plan, oversee, and implement research projects to align with business objectives and strategic growth. I thrive on networking, fostering business connections, and engaging in insightful discussions about scientific challenges and innovative solutions.

R&D related activities in current role



Relevant Skills

- Interest – Innovation & Technology
- Multidisciplinary R&D
- Building Relationships
- Technical Leadership
- Technical Consultancy
- Technical Project Management

Professional Experience

May 2023 – Present **Senior Researcher in Ceramic Technology** The University of Sheffield, UK

- Undertaking comprehensive material analysis (compositional, structural, microstructural, thermal and mechanical) to enhance understanding of constituent materials of ceramic tiles.
- Optimizing manufacturing processes for increased yield and lower carbon emissions.
- Collaboration with various clay and glaze suppliers to ensure smooth coordination.
- Assisting in troubleshooting customer complaints, offering technical analysis and solutions
- Collaborating with engineers & technical managers to identify problems, analyse failures root cause & develop solutions
- Identifying development opportunities to broaden technical expertise
- Participation in seminars and conferences on decarbonization of ceramics
- The impact of the current work has resulted in a reduction of more than £75,000 per annum, along with 126,000 kilograms of carbon emissions reduced.

Jan 2017 – May 2023 **Assistant Professor** Abdul Wali Khan University Mardan, Pak

- Developed and delivered undergraduate and graduate courses in Physics.
- Conducted original research in electro ceramics, leading to more than 20 publications in reputable academic journals
- Secured funding worth PKR 32.9 million for research projects and established two materials labs within the department of Physics AWKUM
- Supervised more than 20 students in their postgraduate studies
- Presented my work at various national and international conferences
- Worked as an undergraduate coordinator, Staff Proctor, Deputy Director financial Aid and Director Admissions in additional capacity managing a staff of more than 15 people.

Oct 2016 – Jan 2017 **Research Technician** The University of Sheffield, UK

- Worked on understanding the electrical properties of AVX multilayer capacitors at ambient and sub-ambient temperatures using impedance and dielectric spectroscopy
- Provided detailed analysis of the study to the company to help them with troubleshooting the issue under consideration.

Oct 2012 – Dec 2016 **Consultant - PhD position** The University of Sheffield, UK

- Developed understanding of compositional Engineering of perovskite materials.
- Worked as a consultant for companies producing technical ceramics such as Johnson Matthey, AVX, and Ionix
- Patented a lead free ceramic material for high temperature actuator applications
- Published Five articles in peer-reviewed journals.
- Acquired comprehensive skills in laboratory management, including handling chemicals, ensuring health and safety compliance, and operating various sophisticated laboratory equipment.

Dr Amir Khesro

R&D projects

- Proof of concept
- Existing products optimisation
- Future-proof product development

Leadership

- Problem Solving
- Team Building
- Communication
- Adaptability
- Financial Management of Project
- Laboratory Management

Team Work

- Cross-functional
- Multidisciplinary
- Multinational & Multicultural

Transferable Skills

- Multi-tasking
- Team work
- Prioritisation
- Independent
- Adaptable
- Ownership
- Collaboration
- Coordination
- Enthusiastic to acquire new knowledge

Memberships



IOM3

Research Metrics

Publications 40+
Total Citations 1,500+
h-index 21
i10-index 29

References

- Available upon request

Education

- Oct 2012 – Dec 2016 **PhD Studies - Ceramics** The University of Sheffield, UK
Thesis: Lead Free Ceramics for High Temperature Actuators
- August 2006 – March 2009 **M.Sc. - Physics** University of Peshawar, Pakistan
Specialisation: Applied Materials Physics
- 2003 – 2005 **B.Sc Studies - Physics & Mathematics** University of Malakand, Pakistan
- In Progress **Level 5 Diploma in Leadership and Management** The Chartered Management Institute, UK

Relevant Technical Skills

- Structural Analysis:** Use of X-ray diffraction and Raman spectroscopy to understand crystal structures.
- Microstructural Analysis:** Electron microscopy and optical microscopy to characterise materials & surfaces
- Electrical Properties:** Use of Dielectric and Impedance spectroscopy to understand electrical micro structure. Measuring piezoelectric, ferroelectric and electromechanical properties.
- Thermal Analysis:** Use of TG/DTA and dilatometry to understand thermal properties.
- Experimental techniques/methods:** SEM, XRD, Optical microscope, TG/DTA, Dilatometry, Piezometer, LCR, Impedance Spectroscopy, Ferroelectric Tester, ceramic processing, TEM sample preparation, Tape Casting, Mechanical polishing, ceramic processing

Research Projects

- NRPU project entitled "Processing and Characterization of Piezoelectric Materials for Energy Harvesting" worth 7.5 Million PKR (completed as a PI)
- University funded project "Establishment of Laboratory of Functional Materials and Devices at AWKUM" worth 3 Million (completed as PI)
- University funded project entitled "Establishment of Energy Research Laboratory (ERL) at AWKUM" worth 3 Million PKR (completed as PI)
- PSF funded project No: PSF/CRP/18th Protocol (01), Titled, "Evaluation of Key Technologies for ethanol-fueled SOFCs power system of extended sailing-range UAV" worth 9.6 Million PKR (completed as Co PI)
- NRPU project entitled "Environmentally friendly multiferroic ceramics for electronic applications by cold sintering method" worth 9.8 Million PKR (in progress as Co PI)

Selected Conference Presentations

- Feasible solutions for lowering carbon footprints in ceramic tile production, Material Science and Smart Materials, May 2024, Athens Greece.
- Decarbonization of ceramics in UK, UKACERS Dec, 2023. Sheffield (UK)
- Temperature dependence of Piezoelectric Properties, PIEZO2017: Electroceramics for End Users IX" February, 2017. Cercedilla, Madrid (Spain)
- Lead-Free Multi-layered Actuators for High Temperature Application, 2016 Joint IEEE International Symposium on the Applications of Ferroelectrics, Darmstadt Germany.
- PbO-Free, Temperature stable and Fatigue resistant Electrostrictors, Sustainable Functional Materials April 2016, Scarborough UK.