

KEFAYAT ULLAH

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Date of Birth	Jan 30, 1983
Nationality	Pakistani
Marital status	Single
Present Address	Department of Physics Malakand university dir lower
Permanent Address	Village Gogdara, P:O. Tariq Abad, Tehsil & Distt. Swat, (Khyber pakhtunkhwa) Pakistan.

Education:

❖ **M. Phil.** **Materials science**

➤ **Dissertation:** The Effect of Be doping to the Superconducting Properties of $(\text{Cu}_{0.5}\text{Tl}_{0.5})\text{Ba}_2\text{Ca}_{1-y}\text{Be}_y\text{Cu}_{0.5}\text{Zn}_{1.5}\text{O}_{8-\delta}$ Superconductors

We have enhanced the superconducting properties of newly discovered $\text{Cu}_{0.5}\text{Tl}_{0.5}\text{Ba}_2\text{Ca}_1$ ($\text{Cu}_{0.5}\text{Zn}_{1.5}$) $\text{O}_{8-\delta}$ superconductor by doping Be at Ca sites. The superconducting properties, such as critical current density, infield magnetic properties and quantity of diamagnetism, are enhanced by Be doping at the Ca sites. The decreased c-axis length and the volume of the unit cell have shown that inter- ZnO_2 -plane coupling is enhanced. We have not observed any localization of the carriers in the neighborhood of Zn atoms in $\text{Cu}_{0.5}\text{Tl}_{0.5}\text{Ba}_2\text{Ca}_{1-y}\text{Be}_y$ ($\text{Cu}_{0.5}\text{Zn}_{1.5}$) $\text{O}_{8-\delta}$ ($y=0, 0.15, 0.30, 0.45, 0.6$) superconductors, The decreased c-axis length results in enhancement of coherence length and Fermi-velocity of the carriers, which in turn result in enhanced superconductivity parameters. The presence of Be at the termination ends of the crystals results in enhanced inter-grain coupling and substantially improved their weak link behavior

University	Department of Physics Quaid-i-Azam University Islamabad, Pakistan.
Year of passing	2010
Division	First
Grade	B
Medium of Instruction	English

Courses studied

• Methods of Mathematical Physics	• Solid State theory-I
• Electrodynamics-I	• Solid State theory-II
• Materials Science-I	• Plasma Physics-I
• Materials Science-II	• Atomic & Molecular Spectroscopy

❖ **M.Sc** **Physics**

University	Dept of physics University of Peshawar
Year of passing	2006
Division	First
Grade	B
Medium of Instructions	English

Courses studied

• Modern Physics	• Electronics
• Electromagnetic Theory	• Classical Mechanics
• Nuclear Physics	• Thermodynamics
• Solid State Physics	• Statistical Mechanics
• Quantum Mechanics	• Mathematical Methods of Physics

❖ B.Sc

Subject	<i>Physics, Mathematics, Electronics</i>
University	University of Peshawar, Pakistan
Year of passing	2004
Division	First
Grade	B
Medium of Instructions	English

Courses studied

• Electricity & Magnetism	• Waves & Oscillations
• Modern Physics	• Calculus
• Mechanics	• Mathematical Methods
• Thermodynamics	• Electronic devices & circuit Theory
• Numerical Analysis	• Digital electronics

Research Experience

Working as a research student in the Materials sciences lab under the supervision of Dr. Nawazish Ali khan in the Department of Physics, Quaid -I-Azam university Islamabad Pakistan since Jan 2009.

Computer Skills

- Office automation
- Software installation
- Origin lab

Fields of Research and Interests

- Nano sciences
- superconductivity

Publication:

Be-doped $\text{Cu}_{0.5}\text{Tl}_{0.5}\text{Ba}_2\text{Ca}_1(\text{Cu}_{0.5}\text{Zn}_{1.5})\text{O}_{8-\delta}$ superconductors J supprcond novl Magn
Doi 10.1007/s10948-010-0806-9

Experimental Techniques:

- X-Ray Diffraction
- Fourier Transform Infrared Spectroscopy
- AC & DC Magnetic Susceptibility
- Four Probe Method for Resistivity

Experience:

Worked as lecturer in Fatima zuhra girls degree college ziarat (AJK)
From Sep 2006 to Sep 2007.

Languages:

- English Excellent (Medium of Instruction)
- Urdu Excellent (National Language)
- Pashto Excellent (Mother tongue)

References:

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