Curriculum Vitae

Sardar Hameed

Born on 4 January 1985 in Lower Dir, Khyber Pakhtunkhwa, Pakistan

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Education:

2024	**University of Groningen, The Netherlands** Ph.D. research in the group of Device Physics of Complex Materials (DPCM) **Thesis title:** *Optoelectronics of Low-Dimensional Quantum Materials via Direct Lamination* **Supervisors:** Prof. Dr. Justin Ye & Prof. Dr. Kaya Kobayashi
2013	**Abdul Wali Khan University Mardan, Pakistan** M.Phil with research in material science **Thesis title:** *Application of Nano Technology to Enhance the Humidity Sensing of Organic Dyes* **Supervisors:** Prof. Dr. Muhammad Tahir and Prof. Dr. Gul Rooh
2010	**University of Peshawar, Pakistan** Master (16 years education) of Physics

	Subjects studied: Modern Physics, Nuclear Physics, Electronics, Quantum Mechanics, Electrodynamics, Classical Mechanics, Solid State Physics, and Statistical and Thermal Physics
2006	**University of Malakand, Pakistan** Bachelor of Science in Physics and Mathematics

Research Area (Experimental Physics):

CVD growth, Mechanical exfoliation and stacking of 2D materials, Micro and Nanofabrication (by electron beam lithography, Photolithography, Wet etching, Dry etching and Mechanical patterning by AFM tip), low dimensional quantum materials, Semiconductors, Superconductivity, Sensors

Publications:

1. O. Zheliuk, Y. Kreminska, Q. Fu, D. Pizzirani, A. Ammerlaan, Y. Wang, **S. Hameed**, P. Wan, X. Peng, S. Wiedmann, Z. Liu, J. Ye & U. Zeitler. Quantum Hall effect in a CVD-grown oxide. Nature Communications 15 (**2024**).
2. G. Feraco, L. De Oreste, S. Ali, **S. Hameed**, A. Ali, J. Ye, R.G. Agostino, and P. Rudolf. "Different healing characteristics of thiol-bearing molecules on CVD-grown MoS_2." *Journal of Physics: Materials* (**2023**).
3. F. Rehman, M. Tahir, **S. Hameed**, F. Wahab, F. Aziz, F. A. Khalid, M. Naeem Khalid, and W. Ali. "Investigating sensing properties of poly-(dioctylfluorene) based planar sensor. "*Materials Science in Semiconductor Processing* 39 (**2015**).

Teaching Experience:

1. Two years of teaching experience at Alfarooq Model School and College Khadagzai, Dir Lower (From 2009 to 2011)

2. SST Math & Physics at GHSS Luqman Banda, Dir lower (From May 2014 to May 2019)

Research Techniques Used:

1. Electron beam lithography (EBL)
2. Photo lithography
3. Dry etching
4. Wet etching
5. Electron beam evaporation
6. Sputtering
7. Atomic layer deposition (ALD)

Software Used:

1. MS Office
2. Origin
3. Igor
4. Mathlab

Languages:

5. English
6. Urdu
7. Pashto

References:

(1) Dr Muhammad Tahir
Assistant Professor, AWKUM, Department of Physics

(2) Dr Justin Ye
Professor, University of Groningen

(3) Dr Iftikhar Ahmad
Professor, University of Malakand, Department of Physics

(4) Dr Shahid Ali
Associate Professor, University of Peshawar, Department of Physics