Junaid Kareem Khan

Citizenship : Pakistan ▪ Date of Birth : 29 Oct, 1983

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Profile

Objective: To be a part of a progressive institution that gives me a scope to update my knowledge and skills in accordance with the changing technologies and be a part of a team that dynamically works towards growth of technology to benefit the society.

Education

Course Work Competed and Research Work in progress	**Ph.D. (Material Science) PHYSICS** University of Karachi, Karachi Pakistan.
February 2016	**M.Phil. ISPA** University of Karachi, Karachi Pakistan.
December 2006	**M.Sc. Applied Physics (Electronics)** **GOLD MEDALIST" & "1st" Position in M.Sc. Electronics.** University of Karachi, Karachi Pakistan.
December 2003	**Bachelor of Computer Science** University of Karachi, Karachi Pakistan.
October 2001	**F.Sc. (Pre- Engineering)** Karachi Intermediate Board, Karachi Pakistan.
March 1999	**Matriculation (Science)** Karachi Matric Board, Karachi Pakistan.

Teaching Experience

➢ Presently working as regular "**Assistant Professor**" in Department of Physics NED University of Engineering and Technology, Karachi, Pakistan.	**Full-time** **13th March,2018 to till Date.**
➢ Regular **"lecturer"** in Physics in Department of Physics NED University of Engineering and Technology, Karachi, Pakistan.	**Full-time** **7th January, 2008 to 12th March 2018**

Current Research Activities

➢ Synthesis of Cobalt and Magnesium based Spinel ferrites with substitution of Rare earth metals and transition metals by Sol-Jel auto-combustion method. **[$Co_{0.5}A_{0.5-u}B_u(Fe_{2-x}R_xO_4)$] (**A, B=Ni, Zn, Mn and Cu, u=0.0, 0.5, 0.125 and x=0.0, 0.2)

- Study of Structural, Spectroscopic, Dielectric and magnetic properties of synthesized materials using X-Ray Diffractometer (XRD), Scanning Electron Microscopy (SEM), Fourier Transform Infrared Spectroscopy (FTIR) and Vibrating Sample Magnetometer (VSM) testing.

Publications

1. **Structural, dielectric, impedance, and electric modulus properties of Cu 2+-substituted Cu x Mn 1-x Fe 2 O 4 spinel ferrites nanoparticles**. Journal of Materials Science: Materials in Electronics. 2021 Feb 6:1-3. **(I.F: 2.2)**
2. **Properties of Al^{3+} substituted nickel ferrite ($NiAl_xFe_{2-x}O_4$) nanoparticles synthesized using wet sol-gel auto-combustion.** Journal of Sol-Gel Science and Technology. https://doi.org/10.1007/s10971-020-05426-5. 11 November 2020 © Springer Science + Business Media, LLC, part of Springer Nature 2020 **(I.F: 2.05)**
3. **Dielectric, impedance, and modulus spectroscopic studies of Lanthanum-doped nickel spinel ferrites $NiLaxFe_{2-x}O_4$ nanoparticles.** Journal of Sol-Gel Science and Technology. https://doi.org/10.1007/s10971-020-05359-z . 29 June 2020 © Springer Science + Business Media, LLC, part of Springer Nature 2020 **(I.F: 2.05)**
4. **Impact of aluminum substitution on the structural and dielectric properties of Ni–Cu spinel ferrite nanoparticles synthesized via sol–gel route.** Optical and Quantum Electronics (2020) 52:190 https://doi.org/10.1007/s11082-020-02304-w **(I.F: 1.61)**
5. **Nickel substituted Manganese Spinel Ferrites nanoparticles for High Frequency Applications"***Journal of Materials Science: Materials in Electronics 1-11,2019.* **(I.F: 2.22)**
6. **Design and Analysis of Normally-On 4H-SiC Vertical Junction Field Effect Transistor (VJFET) Using Sentaurus TCAD Simulation**. Journal of Ovonic Research Vol 15(5): 335-343 (Oct., 2019) **(I.F: 0.68)**
7. **A Simulation Model Approach to Analysis of High Breakdown Voltage in Normally-off 4H-SiC Vertical Junction Field Effect Transistor,** Journal of Ovonic Research Vol 14(6): 459 - 465 (Nov., 2018)
8. **Optimization of Breakdown Voltage Characteristics in Normally-off 4h-Sic VjFET Using Sentaurus TCAD Simulation**, *Science International*, 7595766484019-4022(Sep-Oct,2015).
9. **Determination of Weibull Parameter by Four Numerical Methods and Prediction of Wind Speed in Jiwani (Balochistan)**, Journal of Basic & Applied Sciences, Volume 11, P-62-68 (2015)
10. **Assessment of Wind Energy Potential for Small Scale Power Generation at Thatta, Sindh, Pakistan.** Journal of Basic and Applied Sciences. 2015 Mar 9;11:261-4.
11. **Comparison of wind energy potential for coastal locations: Pasni and Gwadar**. Journal of Basic and Applied Sciences. 2015 Mar 5;11:211-6.

Conference, Workshop and Training

- Workshop on **Technical Computing with MATLAB**, NED UET Karachi (06-08 April,2015).
- Conference "**INSC-37**"(Nathiagali) (2012).
- **2nd school on LHC Physics** in National Center for Physics, Islamabad (25 April-04 May,2011).
- Workshop on **Nanotechnology**.
- 3rd conference on **Physics as World today** (2011).
- 2nd conference on **Physics as World today** (2009).

- First international Conference on P**hysics as World Today** (2008).

MS Thesis and Final Year Projects

- Characterization of Sol-Gel Fabricated Cobalt-Nickle Ferrite CoNiFe2O4 Nanoparticles by the Substitution Transition Metals (M= Cu, Zn, Mn) in Cobalt-Nickle (Co-Ni) Ferrites.
- Synthesis and Characterization of Al^{2+} Doped Strontium Hexaferrite Nanoparticle by Sol-Gel Method.
- Synthesis & Characterization of Copper Substituted Cobalt Ferrite Nanoparticles by Sol-Gel Auto-Combustion Method.
- Synthesis & Characterization of Magnesium Based Spinel Ferrites with Nickel Doped by Sol Gel Auto-Combustion Method.
- Synthesis and Characterization of Z^{+2} Substituted Barium Hexa Ferrite Nanoparticles Using Sol Gel Auto Combustion Method.
- Synthesis, Doping and Characterization of $BiFeO_3$ Nanoparticles Using Sol-Gel Method.
- Synthesis, Doping and Characterization of $BiFeO_3$ Nanoparticles Using Sol-Gel Method.

Personal Information

- Father's Name: Jalal Uddin Khan
- C.N.I.C.: 42201-6509820-5
- Domicile: Karachi East (Sindh)
- Passport No. A3626313