Dr. Atheek P
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BIOSKETCH

Dr. Atheek P is a materials researcher and has been working as an Assistant Professor in the Department of Physics at PSG Institute of Advanced Studies, Coimbatore, India, since January 2025. His research focuses on depositing thin films using Physical Vapor Deposition and Chemical Vapor Deposition methods for photodetector and pressure sensor applications. Dr. Atheek P completed his Master's degree in Physics at PSG College of Arts and Science, Coimbatore, India, followed by his Doctor of Philosophy (Ph.D.) in Physics from PSG College of Technology, Coimbatore, India. During his doctoral studies, Dr. Atheek worked on several industry-related projects, including the development of piezoelectric elements and the analysis of battery residual capacitance using non-destructive testing methods.

Educational Profile

- **Doctor of Philosophy (Ph.D.) in Physics**
  Year of Passing: 2024
  Thesis title: Analysis of Ion Irradiations and Wet Etching of GaN Epilayers Grown by HVPE and MOCVD Techniques.
  Thesis Supervisor: Dr. Puviarasu P, Department of Physics,
  PSG College of Technology, Coimbatore.

- **Master of Science (M.Sc) in Physics**
  Department of Physics
  PSG College of Arts and Science, Coimbatore.

- **Bachelor of Science (B.Sc.) in Physics**
  Department of Physics
  Government Arts College, Coimbatore.

Positions Held

January 2025 – Present	Assistant Professor Department of Physics PSG Institute of Advanced Studies Peelamedu, Coimbatore

Research Areas

- Thin Films (PVD & CVD)
- Photodetectors
- Piezoelectric Materials
- Group III-V materials

Laboratories In-charge

1. Clean Room

Journal Publications

1. Sivasankari, G., Prabha, D., Puviarasu, P. et al. One-pot hydrothermal synthesis of ribbon-stacked g-C_3N_4 nanosheets for high-efficiency supercapacitive energy storage. J Mater Sci: Mater Electron, 2025. https://doi.org/10.1007/s10854-025-15174-3
2. Atheek, P., P. Puviarasu, S. Munawar Basha, and G. Balaji. "Role of micro-Raman technique in material characterization of GaN wide bandgap semiconductor." Progress in Crystal Growth and Characterization of Materials, 2025. https://doi.org/10.1016/j.pcrysgrow.2025.100665
3. Jipsa Paul, Puviarasu P, Atheek P, Sanjeevi P. “Influence of Defects and Temperature on Metal Semiconductor Metal Photodetector Fabricated by Pure and Cationic Doped (Mg^{2+} and Cu^{2+}) SnO_2 Nanoparticles”, ECS Journal of Solid State Science and Technology, 2024. https://doi.org/10.1149/2162-8777/ad7db0
4. Balaji Gururajan, Atheek Posha, Wei-Sheng Liu, Bhavya Kondapavuluri, Tarikallu Thippesh Abhishek, Perumal Thathireddy, Venkatesh Narasihman. “Numerical analysis of cation-substituted kesterite absorber layer and non-toxic buffer layer for enhancing the efficiency of thin-film solar cells.” Journal of Phys. Status Solidi B, 2024. https://doi.org/10.1002/pssb.202400238
5. Palanisami, Sanjeevi, Varuna Jayachandran, Atheek Posha, G. Kalpana, and M. Elango. "A systematic investigation on the potential X-ray attenuation properties of Mg-doped SnO2 epoxy nanocomposite-based aprons as an alternate for lead commercial aprons." Journal of Materials Research, 2024. https://doi.org/10.1557/s43578-024-01314-8
6. Atheek P, Puviarasu P, Basha SM. “Impact of Swift Heavy Ion Irradiation on as-grown Gallium Nitride Epilayers by MOCVD Technique”, Radiation Physics and Chemistry, 2023. https://doi.org/10.1016/j.radphyschem.2023.111430
7. Posha Atheek, Padmanabhan Puviarasu, Munawar Basha S. “Micro-Raman analysis of HVPE grown etched GaN epilayer with porous formation”, Semiconductor Science and Technology, 2023. https://doi.org/10.1088/1361-6641/acd575
8. Atheek P, Puviarasu P, Basha SM, Bhujel K. “Micro Raman analysis on the impact of light ion irradiation of hydride vapor-phase epitaxy grown gallium nitride epilayers”, Thin Solid Films, 2022. https://doi.org/10.1016/j.tsf.2022.139526