



# VIDYA VIHAR INSTITUTE OF TECHNOLOGY

Industrial Growth Centre, Maranga, Purnea, Bihar -854301

To

Mr. Singh Sonu Kumar  
Research Scholar  
Department Name  
Indian Institute of Technology (IIT) Madras  
Chennai - 600036  
Tamil Nadu  
Date- 24/03/2025

**Subject:** Proposal for Collaboration on Sample Characterization

Dear Mr. Singh Sonu Kumar,

I hope this letter finds you well. I am writing to express my interest in collaborating with you on the characterization of materials as part of our ongoing research activities at Vidya Vihar Institute of Technology (VVIT), Purnea.

At VVIT, we are actively involved in exploring advanced materials and their potential applications, particularly in the field of nanotechnology and materials science. We understand that your expertise and the advanced characterization facilities at IIT Madras would greatly enhance the quality and precision of our research outcomes.

We are currently working on the synthesis of various nanomaterials and carbon-based compounds, and we aim to study their structural, morphological, and optical properties. To achieve accurate and comprehensive characterization, we seek your assistance in performing the following analyses:

1. **X-Ray Diffraction (XRD)** for phase identification and crystallographic analysis.
2. **Transmission Electron Microscopy (TEM)** for morphology and particle size determination.
3. **Fourier Transform Infrared Spectroscopy (FTIR)** for functional group analysis.
4. **Raman Spectroscopy** for vibrational and structural insights.
5. **UV-Vis Spectroscopy** for optical characterization.
6. **VSM**



We firmly believe that a collaboration with you and IIT Madras will significantly boost the scientific rigor of our research. Additionally, we are open to discussing co-authorship and joint publications resulting from the collaborative work.

Your guidance and involvement would be invaluable, and we are keen to discuss this collaboration at your convenience. Kindly let us know a suitable time to discuss this proposal further.

Thank you for your consideration, and we look forward to your positive response.

Warm regards,

**Dr. Aniket Manash**

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Aniket  
24/3/25

**IQAC CELL**

Vidya Vihar Institute  
of Technology,  
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