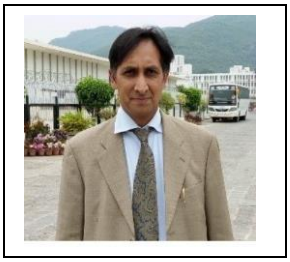
Prof. Nasir Ahmad

Professor
Department of Materials Engineering

Email: nasir.ahmad@scme.nust.edu.pk
Tel: +92 51 9085 5213



Prof. Nasir Ahmad brings over 30 years of applied R&D experience in polymer materials, sustainability, and advanced materials engineering. His research and consultancy work focus on developing sustainable materials, processes, and technologies that address critical global challenges related to **climate change, energy, water, and health**.

With extensive experience across academia, industry, and international collaborations, Prof. Ahmad has led multidisciplinary teams in designing and implementing **functional and recyclable polymers, advanced coatings, and membrane technologies**. His leadership emphasizes practical innovation and the translation of research into real-world industrial solutions.

He has worked on several impactful projects, including **water purification systems, sustainable polymer coatings, and bio-based materials**, contributing directly to global efforts toward **net-zero carbon emissions** and resource sustainability.

Areas of Expertise

- Sustainable and recyclable polymer systems
- Polymeric membranes for water and energy sustainability
- Anticorrosion and protective coatings for industrial environments
- Biopolymer functionalization for pharmaceutical applications
- Sustainable thermosets and bio-based resins
- Quantitative sustainability modeling of materials and systems

Consultancy & Research Capabilities

- **Laboratory Facilities:** Polymer Processing & Characterization, Surface Engineering & Coating Labs, Membrane Fabrication & Testing Facilities.
- **Core Competencies:** Industrial R&D consultation, product and process development, and technology prototyping for sustainable materials and coatings.

Representative Projects

- Industrial Silicone RTV Coatings (Room Temperature Vulcanized)
- Anticorrosion Conductive Coatings for Heat Exchangers
- Waterborne Epoxy Coatings and UV-Protective Finishes for Textiles
- LDPE and EVA Biomedical Polymers for Pharmaceuticals
- Drinking Water Treatment Using Antifouling Polymeric Membranes (HEC-NRPU)
- Hybrid High-Purity Mobile Water Treatment System for Energy Sector
- Development of Intrinsic Anti-Fouling Transparent Polymers for Photobioreactors

Potential Consultancy Areas

- Development of sustainable and bio-derived polymer materials
- Industrial and environmental protective coatings
- Water purification and membrane technology solutions
- Prototyping and process scale-up for industrial applications
- Technology transfer and industrial innovation partnerships

Collaborations & Networking

- **International Partnerships:** McGill University (Canada), Escher-Grad Technology (Canada), Polychem Corporation (Canada), Celanese International Corporation.
- **Preferred Engagements:** Joint R&D, Prototyping, Industrial Consultancy, and Technology Transfer.