

Research Projects Undertaken by Premier Research Institutes Under National Technical Textiles Mission (NTTM)

S. No.	Research Topic	Segment	Name of the Institution
1.	High performance composite fibres	Specialty Fiber	IIT Delhi
2.	Activated and patterned carbon nanofibers based advance design configuration for High performance Lithium-ion batteries and supercapacitors	Specialty Fiber	IIT Hyderabad
3.	MicroRNA Diagnostic Kit using Doped Carbon Nanofibers	Specialty Fiber	IIT Jammu
4.	A technology platform for design and manufacturing of advanced and multi-functional 3D woven Textile Structural Composites using High performance and natural fibres	Specialty Fiber	IIT Delhi
5.	Scaling up of electro spring process for nanofibers	Specialty Fiber	IIT Hyderabad
6.	Carbon based dermal patch for vitiligo therapy	Specialty Fiber	IIT Bombay
7.	Engineering Fibers for Fog Harvesting and Interfacial Solar Water Purification	Specialty Fiber	IIT Kanpur
8.	Biodegradable & bioactive nanofibrous facemask	Specialty Fiber	IIT Bombay
9.	Development of Tyre Tread Compound using Graphene in combination with Carbon & Silica as a Reinforcing Filler for Reducing the Rolling Resistance(RR) and Improving Fuel Efficiency	Specialty Fiber	IRMRA
10.	Development Of Carbon Nano tube Reinforced Acrylic Precursors For Carbon Fibre	Specialty Fiber	BTRA
11.	Design and development of facile high through put needle less electrospinning set-up	Specialty Fiber	SITRA

12.	Mass Production of High Performance Carbon Fibers and Nanofibric Separators by Electro-spinning Techniques for Rechargeable Batteries and Super-capacitors	Specialty Fiber	IIT- Roorkee
13.	Development of biocompatible glass fibre composite for healthcare applications	Specialty Fiber	IIT-Kharagpur
14.	Knitting for Composite Preform Developments using Technical Yarns	Specialty Fiber	IIT Delhi
15.	Combating Pandemics through textiles: An Approach to Ease Viral/ Bacterial Infections using advanced Nano Fibrous fabrics	Specialty Fiber	IIT- Indore
16.	Synthesis of Carbon nanofibres from textile/cotton waste	Specialty Fiber	IIT -Kharagpur
17.	Development of Parachute material using high molecular weight/ high strength polyethylene yarns	Specialty Fiber	ADRDE, DRDO, Agra
18.	PTFE coated Glass/Para-aramid fabric for large Inflatable Randomes	Specialty Fiber	ADRDE, DRDO, Agra
19.	Next Generation lightweight, breathable Activated Carbon Fabric (ACF) & Nano web based multilayered chem.-bio facemask for protection against Toxic Chem-Bio Agents	Specialty Fiber	DRDE, DRDO, Gwalior
20.	Insecticide incorporated Agronets: Green Technology to minimize the insecticide burden to biosphere	Specialty Fiber	Defence Research Laboratory, DRDO, Assam
21.	Neuroprotective Smart Textile for Preventing Cerebral Palsy: Countering Brain Injury in Children	Specialty Fiber	IIT BHU, Varanasi
22.	Development of Multifunctional Graphene incorporated High Molecular Weight Polyethylene (HMWPE) or High	Specialty Fiber	IIT Delhi

	Density Polyethylene (HDPE) fibres by an alternative melt route		
23.	Scalable Manufacturing of MXene / Graphene / 2D material Impregnated Hollow Flexible Carbon Fibers for Energy Storage and Conversion Applications	Specialty Fiber	Institute of Nano Science and Technology, Mohali
24.	Biodegradable self-sanitizing bacterial nano cellulose fabric for air and water filtration	Specialty Fiber	IIT Hyderabad
25.	Design of fibre-like crosslinked high stable polymeric material to remediation of textile generated waste management	Specialty Fiber	IISER, Kolkata
26.	Carbon Fiber-based functional electrode materials for energy storage applications	Specialty Fiber	IIT Delhi
27.	Development of EMI shielding and heat generating activated carbon fabrics from textile wastes	Specialty Fiber	IIT Delhi
28.	Performance evaluation of Water Hyacinth as an alternate geotextile material	GeoTech	IIT-Guwahati
29.	Laboratory And Field Investigations on PET Geo grid-Reinforced Base/Sub base Courses	GeoTech	IIT Hyderabad
30.	Development of multifunctional structural geotextiles using Textile wastes and Hybrid fabrics	GeoTech	IIT-Delhi
31.	Use of geosynthetics in pavements over soft and expansive subgrades: A sustainable solution	GeoTech	IIT-Hyderabad
