

Nanotechnology Research Institutes in India

| <u>S.No</u> | <u>Research Institute</u> | <u>Geographical Location</u> | <u>Research Areas</u> | <u>URL</u> |
|-------------|---|------------------------------|---|---|
| <u>1.</u> | Alagappa University, Karaikudi. | Tamil Nadu | <ol style="list-style-type: none"> 1. Development of nano-crystalline LiMn₂O₄ based cathode materials for high performance Li-ion batteries. 2. Synthesis and characterization of Nano-Crystalline La₂Mo₂O₉ Based Oxide-Ion Conductors. 3. Synthesis and characterization of nano-crystalline LiM_xMnO (M=Co, Cr, Sr, Mg and Nd) cathode materials for high voltage lithium-ion batteries. 4. Development of nano-crystalline LiMn₂O₄ based cathode materials for high performance Li-ion batteries. 5. Synthesis and characterization of nano-crystalline LiM_xMnO (M=Co, Cr, Sr, Mg and Nd) cathode materials for high voltage lithium-ion batteries. | http://www.alagappauniversity.ac.in |
| <u>2.</u> | Amity Institute of Nanotechnology, Noida. | Uttar Pradesh | <ol style="list-style-type: none"> 1. Synthesizing of Carbon Nanomaterials. 2. Development of Nanophosphors. 3. Drug/Vaccine Delivery. 4. Water Purifications. 5. Development of Nano-oxides- Al₂O₃, TiO₂ etc. | http://www.amity.edu/aint/ |
| <u>3.</u> | Amrita Institute of Medical Sciences, Kochi | | It has a center for Nanotechnology based Stem Cell Research. | http://www.aimshospital.org/ |
| <u>4.</u> | Anna University, Chennai. | Tamil Nadu | <ol style="list-style-type: none"> 1. Protein Nanoscience. 2. Nanotechnology applications in cancer. 3. Nanoporous protein scaffolds. | http://www.annauniv.edu/ |
| <u>5.</u> | Banaras Hindu University, Varanasi. | Uttar Pradesh | <ol style="list-style-type: none"> 1. Chemistry of Functional Organic Nanomaterials. | http://www.bhu.ac.in/ |
| <u>6.</u> | Bangalore University, Bangalore. | Karnataka | <ol style="list-style-type: none"> 1. Nanostructural materials synthesized by Hydrothermal and combustion/microwave routes and their application. | http://www.bub.ernet.in/ |

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| <u>7.</u> | Barkatullah University, Bhopal. | Madhya Pradesh | 1. Investigation of electronic and Phonon Properties of nanostructured materials. | http://www.bubhopal.nic.in/ |
| <u>8.</u> | Delhi University, Delhi | Delhi | 1. Detection of Polymeric nano-particulate drug d delivery system for anti-cancer drug by Quantitative Fluorescence Microscopy. 2. Particulate carriers for targeting mammalian cell types using nano-technology. 3. Stimuli-sensitive polymeric nano-particles based advanced drug delivery system. 4. Nanosurface adsorbate interactions. | http://www.du.ac.in/ |
| <u>9.</u> | Department of Physics, Vishva Bharati, Shantiniketan, | West Bengal | 1. Synthesis of nanoparticles | http://www.visvabharati.ac.in/ |
| <u>10.</u> | Hyderabad University, Hyderabad | Andhra Pradesh | 1. Novel Physics with nano-composites and metamaterials. 2. Magnetism, Superconductivity, and other quantum phenomena at nanometer length scale. 3. Ion beam analysis, modification and characterization of nano-materials 4. Optical elements using metallic nanostructures 5. Nanocathodes and nano-electrolytes for Li ion batteries | http://www.uohyd.ernet.in/ |
| <u>11.</u> | Indian Institute of Science, Bangalore | Karnataka | 1. Nano CMOS Transistors 2. Spintronics 3. Soft lithography 4. Testing and Characterization of Nanoscale Phenomenon 5. Simulation and Modeling Nanoscale Phenomenon | http://nano.iisc.ernet.in/ |

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| <u>12.</u> | Indian Institute of Technology, Delhi | Delhi | <ol style="list-style-type: none"> 1. Nanoelectronics 2. Nanomagnetism 3. Nanoparticle manufacturing 4. Nanoparticle-Gas Interaction 5. Nanosensors 6. Nano-Optics, Nanophotonics 7. Nanostructured Films 8. Bionanomaterials | http://www.iitd.ac.in/ |
| <u>13.</u> | Indian Institute of Technology, Bombay | Maharashtra | <ol style="list-style-type: none"> 1. R&D of Engineered/Hybrid Nanomaterials for Healthcare, Scientific and Engineering Applications. 2. Nanobiotechnology for Therapeutic Applications. 3. Nanoelectronics for Healthcare Monitoring and Diagnosis. 4. Vibration, Fatigue, Fracture, and Reliability Testing Systems for Micro/Nano-Devices. 5. Conducting Polymer Based Sensors. 6. Micromagnetics simulation and study of magnetic structure. 7. Studies on understanding flow in microchannels. 8. Environmental aerosols and nanoparticles. | http://www.iitb.ac.in/~crnts/index.html |
| <u>14.</u> | Indian Institute of Technology, Chennai | Tamil Nadu | <ol style="list-style-type: none"> 1. Nano-particle technology 2. Nano-composites 3. Nanocrystalline metals, alloys and intermetallic compounds, nanocomposites. | http://www.iitm.ac.in/ |

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| <u>15.</u> | Indian Institute of Technology, Kanpur | Uttar Pradesh | <ol style="list-style-type: none"> 1. Nanostructures and Nanomaterials for Printable Electronics. 2. Nanostamping 3. Nanoelectrodes 4. Nanopatterning 5. Nanocomposites 6. Nanotechnology-based polymers. | http://www.iitk.ac.in/ |
| <u>16.</u> | Indian Institute of Technology, Guwahati | | <ol style="list-style-type: none"> 1. Newer Chemical and Physical Methods of Engineering Devices Consisting of Nanoscale Functional Components. 2. Development of Semisensitive Nanoparticles for Controlled Release System. 3. Engineering Nanoscale Materials and their Applications in Nanotechnology. 4. Novel Nanoscale Materials: Generation, Characterization and Device and application | http://www.iitg.ernet.in/ |
| <u>17.</u> | Indian Institute of Technology, Kharagpur | | <ol style="list-style-type: none"> 1. Development of quantum well infrared photodetectors in the wavelength range 8-14um using Si/SiGe nanotechnology. 2. Nanotechnology and radiation processing of organic inorganic hybrid materials based on thermoplastic elastomers. 3. Nanocomposites, Nanoceramics & Nanomaterials. 4. Nanocermetts. 5. Nanopolymers. 6. Nanomechanics. | http://www.iitkgp.ac.in/rnd/ |
| <u>18.</u> | Indian Institute of Technology, Roorkee | Uttaranchal | <ol style="list-style-type: none"> 1. Nanoelectronics 2. Nanoscale MOSFET modelling and simulation 3. Mesoscopic transport phenomenon 4. Quantum Cellular Automata | http://www.iitr.ernet.in/ |

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| <u>19.</u> | Jawaharlal Nehru Center for Advanced Scientific Research (JNCASR), Jakkur, Bangalore | Karnataka | <ol style="list-style-type: none"> 1. Nanometals. 2. Metal Bilayers. 3. Dip-Pen Nanolithography. 4. Pulsed Laser Deposition of Nanostructures. 5. Electrical properties of Nano-objects. | http://www.jncasr.ac.in/ |
| <u>20.</u> | Jawaharlal Nehru University, New Delhi | Delhi | <ol style="list-style-type: none"> 1. Nano-Phase of Organic and Inorganic Semiconductors. 2. Synthesis of Nanostructures. 3. Nanomaterials & NanoBioSensors 4. Nanomagnetism | http://www.jnu.ac.in/ |
| <u>21.</u> | Jadhavpur University, Kolkata. | West Bengal | <ol style="list-style-type: none"> 1. Nano Structural Materials 2. Nanocrystalline Materials 3. Nano fabrication 4. Nanocomposites 5. Nanomagnetism 6. Nanofluidics 7. Nanodiamond, Diamond Like Nanocomposites 8. Carbon Nanotubes And Their Field Emission Properties 9. II-VI Semiconductors Nanostructues | http://www.jadavpur.edu/ |
| <u>22.</u> | Madras University, Chennai | Tamil Nadu | <ol style="list-style-type: none"> 1. Catalysis by metal nano Particles. 2. Functionalisation of polymer nano particles 3. Polymers for nano particle 4. Nano Diffraction 5. Nanocrystalline particles | http://www.unom.ac.in/index.php |
| <u>23.</u> | Mahatma Gandhi University, Kottayam | | <ol style="list-style-type: none"> 1. Nano Materials Synthesis 2. Nano Composites | http://www.mguniversity.edu/ |
| <u>24.</u> | Osmania University, Hyderabad | Andhra Pradesh | <ol style="list-style-type: none"> 1. Nanoferrites 2. Nanomaterials | http://www.osmania.ac.in/ |
| <u>25.</u> | Presidency College, Kolkata | West Bengal | <ol style="list-style-type: none"> 1. Nano composites based on some conducting polymers. | http://www.presidencycollegekolkata.ac.in/ |

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| <u>25</u> | Presidency College, Kolkata. | West Bengal | 2. Polymer based glassy nano-materials (Ferrite, semiconducting) | http://www.presidencycollegekolkata.ac.in/ |
| <u>26.</u> | Panjab University, Chandigarh. | Punjab | 1. NanoBioMaterials 2. Nanocomposites 3. Nanophosphors 4. Nanowires | http://www.puchd.ac.in/ |
| <u>27.</u> | Sardar Patel University, Vallabh Vidyanagar. | Gujarat | 1. Nano particle synthesis and their characterization 2. NanoElectronics 3. Carbon Nanotubes | http://www.spuvvn.edu/ |
| <u>28.</u> | Thapar University, Patiala. | Punjab | 1. Preparation & characterisation of Nano-Dispersed liquid crystal polymer composite Materials 2. Preparation & Characterisation of Electro ceramic-Polymer Nano-Composite Materials 3. Fabrication of CDs nanowires & their characterization 4. Synthesis Characterization and application of chalcogenide nano/ Microstructures 5. NanoMagnetic Materials 6. Generation of Metal Nanoparticles through biotransformation mechanisms 7. Nanosensors & Nanodevices 8. Nanostructured Polymers & Films | http://tiet.ac.in/ |
| <u>29.</u> | University of Poona, Pune. | Maharastra | 1. Zero G Properties Of Fluids For Nano-Particle Applications 2. Nanostructure based dielectric materials for filters and oscillators in satellite systems 3. Nanocrystalline Fe-Ni base and Fe-Cu-Nb-Si-B base soft magnetic alloys for RF coaxial switches and stepper motors 4. Nano phase glass ceramics 5. Nanocrystalline ceramics for re-entry and reusable type of space vehicles 6. Nanoparticles by sol-gel method 7. Nano Sized Cds Powder By Organo Metallic Routes For Solar Cell Application 8. Synthesis of elastomer nanocomposites for potential use at cryogenic temperature conditions | http://www.unipune.ernet.in/ |