

SCIENZA E NANOTECNOLOGIE DEI MATERIALI

PE3_1 Structure of solids, material growth and characterisation

PE3_2 Mechanical and acoustical properties of condensed matter, lattice dynamics

PE3_3 Transport properties of condensed matter

PE3_4 Electronic properties of materials, surfaces, interfaces, nanostructures

PE3_5 Physical properties of semiconductors and insulators

PE3_6 Macroscopic quantum phenomena, e.g. superconductivity, superfluidity, quantum Hall effect

PE3_7 Spintronic

PE3_8 Magnetism and strongly correlated systems

PE3_9 Condensed matter – beam interactions (photons, electrons, etc.)

PE3_10 Nanophysics, e.g. nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics

PE3_11 Mesoscopic quantum physics and solid-state quantum technologies

PE3_12 Molecular electronics

PE3_13 Structure and dynamics of disordered systems, e.g. soft matter (gels, colloids, liquid crystals), granular matter, liquids, glasses, defects

PE3_15 Statistical physics: phase transitions, condensed matter systems, models of complex systems, interdisciplinary

PE4_4 Surface science and nanostructures

PE4_8 Electrochemistry, electrodialysis, microfluidics, sensors

PE4_10 Heterogeneous catalysis

PE4_13 Theoretical and computational chemistry

PE4_16 Corrosion

PE4_17 Characterisation methods of materials

PE5_1 Structural properties of materials

PE5_2 Solid state materials chemistry

PE5_3 Surface modification

PE5_4 Thin films

PE5_6 New materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles

PE5_7 Biomaterials synthesis

PE5_8 Intelligent materials synthesis – self assembled materials

PE5_12 Chemistry of condensed matter

PE5_13 Homogeneous catalysis

PE5_14 Macromolecular chemistry

PE5_15 Polymer chemistry

PE5_16 Supramolecular chemistry

PE5_17 Organic chemistry

PE11_1 Engineering of biomaterials, biomimetic, bioinspired and bio-enabled materials

PE11_2 Engineering of metals and alloys

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PE11_3 Engineering of ceramics and glasses
PE11_4 Engineering of polymers and plastics
PE11_5 Engineering of composites and hybrid materials
PE11_6 Engineering of carbon materials
PE11_7 Engineering of metal oxides
PE11_8 Engineering of alternative established or emergent materials
PE11_9 Nanomaterials engineering, e.g. nanoparticles, nanoporous materials, 1D & 2D nanomaterials
PE11_10 Soft materials engineering, e.g. gels, foams, colloids
PE11_11 Porous materials engineering, e.g. covalent-organic, metal-organic, porous aromatic frameworks
PE11_12 Semi-conducting and magnetic materials engineering
PE11_13 Metamaterials engineering
PE11_14 Computational methods for materials engineering
LS7_3 Nanomedicine