

Advanced analysis techniques for the development of innovative materials and devices

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The Institute of Structure of Matter (ISM) has advanced analysis techniques for studying the properties of matter spatially down to the atomic scale and ultrafast dynamics down to the femtosecond range. In the framework of the MicroNanoFab initiative, based on the development of novel materials and devices, the ISM will contribute with facilities and know-how spanning from the structural characterization of materials (e.g. x-ray diffraction) to their charge transport qualification (e.g. Hall effect probe, contactless electrical resistivity setup, electron emission and electrical measurements at high temperature), to the scanning probe microscopy and spectroscopy (e.g. AFM, STM and STS). Such peculiar analysis methods will be completed by the newly assembled TEMPISM platform (TEchnology Material Platform of CNR-ISM), able to furnish more than 150 services and techniques also to external research organizations and industry, and structured into Theory, Analysis, Synthesis, and Prototyping lines.