CERIC

Central European
Research Infrastructure
Consortium

Open for
Industry

Optoelectronics

Enhanced conductive and magnetic properties of materials and miniaturisation are areas on which industry is focusing its efforts to come up with better innovations and inventions. CERIC Partner Facilities can offer extensive knowledge and a wide range of solutions for materials development in this area.

- Structure and behaviour of electrochemical systems and devices, semiconductors, superconductors and graphene systems
- Composition, structure and microstructural defects of thin films/ thin layers

Structure and behaviour of electrochemical systems and devices, semiconductors, superconductors and graphene systems

CERIC provides studies of chemical and electronic properties and structure – down to sub-micrometre size – of materials such as semiconductors, high-temperature superconductors, topological insulators, low-dimensional materials and related devices. Electrochemical systems can also be studied in operando. CERIC offers analysis, down to nanoscale, of the surface behaviour, in-surface interactions and interface phenomena in electrochemical systems and semiconductors under realistic conditions. CERIC carries out research on induced graphene superconductivity and graphene acquisition of functionalities beyond its intrinsic properties that can be used for possible spintronic applications.

Composition, structure and microstructural defects of thin films/thin layers

Among other types of investigations, CERIC offers its expertise in the characterisation of thin (but also thick) films, their quality, composition, deposition and microstructural defects. CERIC Partner Facilities can offer structural measuring of thin films or liquid surfaces, providing detailed information on the near-surface structure, including thin films layered on a substrate and multilayers for UV mirrors, giant magnetic resistance and magnetic recording.