

Services

CPERI contributes to the increased competitiveness of the Greek and European industry by providing unique and innovative solutions to research problems of technological and/or commercial interest.

CPERI's R&D results have led to the development of new products and services that have found applications in many international and Greek industries. Some of the successful applications and products include:

- Catalyst evaluation for petroleum refining processes ([FCC catalysts evaluation](#) , [FCC additives evaluation](#) ,
[HDS catalysts evaluation](#) , Hydrocracking) and [Fuels quality control](#)
- Technologies for the production of environmentally-friendly fuels
- Advanced software tools for the design, optimization and control of polymer production processes ([Polymeric Materials - New Technologies](#))
- Development of microencapsulation technologies and controlled release applications
- Technology for the synthesis, characterization and application of ceramic and polymeric membranes
- Evaluation of emission control devices for mobile and stationary sources
- Development of advanced electronic materials and products for the telecommunication industry
- Emission and immunity testing of materials and devices under radiated electromagnetic energy
- Technologies for product quality control in solids processing manufacturing plants
- Design, application and testing of anti-polluting technologies.
- [Analysis and Characterization of Solids](#)

Infrastructure

During the past ten years, CPERI developed excellent experimental facilities and acquired high quality analytical instrumentation, including:

- Modern laboratory equipment for the detailed physical, chemical and morphological characterization of inorganic materials, catalysts, polymers, membranes and molecular sieves.
- Pilot plant units and laboratory scale units for the evaluation of refinery and petrochemical catalysts.
 - Automated pilot plant units for polymer synthesis.
 - Gas emission control systems for particle and pollutant removal from fixed or/and mobile sources.
 - Reactors for nanoparticles synthesis and coatings using aerosol processes.
 - Equipment for measurement of particulates and powders with in-situ optical, aerodynamic and electrokinetic techniques, from 3 nm to 1000 μm .
 - Membrane pilot units for gas separation, reverse osmosis, ultrafiltration, waste processing.
- Pilot units for energy potential enhancement of solid fuels and production-application of molecular sieves and carbon fibers.
 - Automated pilot plant units for the study of membrane processes (MF, UF, NF, RO).
 - Specially equipped units for multiphase flow in process equipment (e.g., packed beds, heat exchangers) and pipelines.