

The success of many Environmental/Health, Energy, and Materials/Process Industries, related issues relies on understanding and exploiting the science of fine particles and their suspensions in various media. Recognizing the opportunities offered by this diverse, yet based on common grounds, set of applications, the [Aerosol & Particle Technology Laboratory](#) (APTL) of CERTH/CPERI was established in 1996, with the objective to conduct basic & applied research as well as develop new technological products in these “niches”. The Laboratory’s growth and development strategy so-far has been based on well-acknowledged market needs as depicted below:

MARKET NEEDS

- Clean Transport Technologies
- Clean Energy Technologies
- Process in-situ Monitoring

CORE TECHNOLOGY PLATFORM DEVELOPMENT

- Particle measurement (in-situ optical, aerodynamic and mobility techniques)
- Pilot scale testing (engine emission cell, filter/membrane testing unit)
- Advanced simulation (CFD and discrete particle dynamics in PVM environment)
- Aerosol reaction engineering (nano-particle synthesis)

PRODUCTS

- Diesel exhaust particulate aftertreatment systems (including systems design simulators)
- Hot gas filter systems
- Nano-particle sensors