IMEM is part of Italy National Research Council (CNR). It was established in 2001, in Parma, includes the CNR research branches located in Genova, Trento and Torino and inherited the long lasting fruitful traditions of MASPEC and CFSBT.

Within the best CNR tradition, IMEM interprets an interdisciplinary vision and a research practice in material science, complementing refined growth synthesis and characterization methods with theoretical modelling and device prototyping aiming at exploring and demonstrating functional properties, applications and technological perspectives.

IMEM envisions a tight interplay between curiosity driven basic and applied science with technological research, addressing and focusing more and more the activity and interactions towards materials, processes and devices for energy, sensing and biomedicine.

The major activities deal with investigating and tailoring properties of materials of new generation including: semiconductors, magnetic and superconducting materials, systems and devices; semiconductor quantum dot (QDot) nanostructures; nanostructures on metallic surfaces; oxides nanostructures, molecular and hybrid materials engineered at different length scales; nanosystems and functionalization processes for sensing devices and biomedicine.

Training of young researchers is a relevant part of our mission including our direct contribution to the development of PhD programs in particular in the Science and Technology School of the University of Parma.

IMEM staff includes about 50 research scientists and about 20 technical staff members. Furthermore, 31 associates from partner universities and research institutes collaborate tightly in our labs.

IMEM research scientists have a long-standing tradition of international collaborations with leading research labs located in many countries worldwide.

Well established and relevant collaborations within Italy, particularly with teams in universities, research centres as well as in industries, makes IMEM one of the very dynamic Italian research institutions in material science and technology.
Since the beginning the focus has been studies on preparation and tailoring properties of novel materials aiming at applications in: photonics, microelectronics, magnetics, energetics, sensing and biomedicine.

Products developed with industrial partners

Role of IMEM-CNR:
- materials engineering
- technology development
- prototype manufacturing

Industrial Partners
- Baltur Srl
- Centro Ricerche FIAT Spa
- CTG - Italcementi Spa
- Edison Spa
- GNRSrl
- Merz Srl
- Thales Alenia Spa
- THALYSrl
- Vetr — ENI Spa
- MSDE Srl
- Zafer Srl
- Zanotti Spa