

CRDC – TECNOLOGIE

MISSION

The TECNOLOGIE CRdC is a limited company organised as a consortium of universities and independent research institutes. The organisation was created from a project originally financed by the European Union and the Campania Region.

Its mission is to stimulate and promote product and process innovation to encourage the competitiveness of small and medium businesses in the region in the sectors of polymeric, composite and bio-materials, advanced components, apparatus and sensors, industrial engineering, energy and integration of energy systems, automation and control of production processes.

GOALS

The objective of the CRdC is to fulfil its mission by involving the two major players in the technological challenge: government departments and businesses, seeking to connect supply and demand for new technologies, and to promote the integration of technology on an international scale, including the involvement of other economic, cultural and administrative systems.

ACTIVITIES

The networked know-how is mainly concentrated in the following sectors:

- ◆ biomaterials;
- ◆ industrial engineering;
- ◆ polymeric materials;
- ◆ energy;
- ◆ electronics.

In the context of its sectors of activity, the New Technologies CRdC is in a position to offer services in the fields of:

- ◆ process and product development;
- ◆ personalised innovation planning on the basis of the individual firm's requirements;
- ◆ consultancy on specific technical problems;
- ◆ making available know-how on access to finance on favourable terms and venture capital.

The New Technologies CRdC is also an operator capable of answering specific needs for innovation by supplying:

- ◆ technical/scientific services;
- ◆ integrated planning;
- ◆ technology transfer.

STRUCTURE

The CRdC has more than 300 participating experts operating in 11 structures, including universities, research institutes and laboratories present in Campania.

For its research and technology transfer, the TECNOLOGIE CRdC has access to:

- Organic semiconductors;
- Innovative oxide thin films
- Modelling and investigation of extremely high frequency devices and circuits;
- Electrothermal analysis of electronic systems and devices;
- Full-custom design of advanced VLSI systems;
- Integrated control systems;
- Networks of sensors and microcontrollers;
- Distributed control of complex systems.

PROJECTS/PRODUCTS

TECNOLOGIE CRdC handles projects in sectors of great appeal and strong commercial potential:

Polymeric Materials

- Intelligent fibres, thermo-regulating micro capsules, novel stabilizing and flame retardant systems, thermo-chromatic and fluorescent additives, novel perfumes and essences for innovative textiles
- Structural and functional foams for the controlled, localized elastic and dissipative response of active devices
- Materials for the controlled delivery of chemicals
- Composites and nanocomposites with modulated electrical and magnetic properties
- Novel materials with modulated hydrophobic/hydrophilic properties
- Organic/inorganic hybrids with innovative water vapour transport, structural and insulating properties

Biomaterials

- New technologies for bioplastics (natural proteins and polysaccharides)
- Bone repair materials with a pre-defined 3-D scaffold structure
- Novel composites for tooth fillings
- New materials for tissue engineering
- Hydrogels for agricultural and health care applications

Energy

- System integration for grid connected and stand alone Distributed Electrical Generations, based on renewable electrical power plant, Hydrogen fuel-cells, Hydrogen storage system for stand alone wind photovoltaic power generation, Co-generation
- Advanced Information and Communication Technologies (ICT) for supervision, management and control of geographically distributed plants and systems
- Analysis and monitoring of Power Quality problems in Power Systems
- Power management in Electric and hybrid vehicles
- Lightning Early-Warning for distribution power line
- Antennas and electromagnetic compatibility

Industrial Engineering

- Modelling and simulation
- Advanced design of aircraft and land vehicle structures

Electronics

- Development of functional and structural materials for conventional, oxide and plastic electronics
- Advanced facilities for the manufacture and testing of analog and digital devices
- Commercial sensors and/or custom sensors to be used in different scenarios, from the seismic or volcanic areas monitoring to indoor gas detection and quantification
- Nano-engineering of innovative devices for telecommunications, ICT, quantum information, medical diagnostics

Applied Research

- Facilities for the design of novel polymeric materials, biomaterials, composites and nanocomposites for the fields of agriculture, health care, medicine, pharmaceuticals, packaging, transport, building and recreation activities
- Technologies for the production of innovative textiles
- Design of innovative organic/inorganic hybrids for acoustic and thermal insulation and for structural applications
- Technologies for the development of scaffolds for hard and soft tissue engineering
- Technologies for the development of prosthesis for orthopedics and dental applications
- Protocols for the in vitro and in vivo characterization and design of bio-medical devices
- Technologies for the production of packaging systems from bio-based plastics
- Design of innovative integrated solutions in order to improve Distributed Electrical Generation based on renewable sources
- Development alternative storing systems, based on gas-hydrogen production
- Development of Supervisory Control and Data Acquisition system aided by remote sensing technologies for Dispersed Generation
- Prototype development
- Certification of electric and electronic equipments for information technology, industrial, automotive in accordance with the main European and Italian EMC standards
- Design of high performance digital circuits, optoelectronic devices, power electronic devices
- Dynamic temperature mapping on power devices
- RF and microwave device characterisation
- Electrical and magnetic characterisation of novel materials for conventional, oxide and plastic electronics

Contacts

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