## **Locations**

#### Genova

#### Headquarter

Corso F.M.Perrone, 24 16152 Genova - Italy Ph. +39 010 6598 750 E-mail segreteria@spin.cnr.it PEC protocollo.spin@pec.cnr.it Director Fabio Miletto Granozio Deputy director Andrea Malagoli

#### Napoli with Pozzuoli Research Unit

c/o University of Napoli "Federico II", Department of Physics via Cintia, I-80126 Napoli and Area di Ricerca Napoli 3 Via Campi Flegrei 34, 80078 Pozzuoli Ph. +39 081 676233 Deputy director Ettore Sarnelli

#### Roma

#### **Research Unit**

c/o Tor Vergata University of Rome Department of Civil Engineering and Computer Science Via del Politecnico 1, 00133 Roma Ph. +39 06 4993 4392 Deputy director Roberto Felici

## L'Aquila with Chieti Research Unit

c/o University of L'Aquila, Department of Physics Via Vetoio, 67010 Coppito (AQ) and DNI Università Chieti - Pescara "Gabriele D'Annunzio" Via dei Vestini 31, 66100 Chieti Ph. +39 0862 433 759 Deputy director Alessandro Stroppa

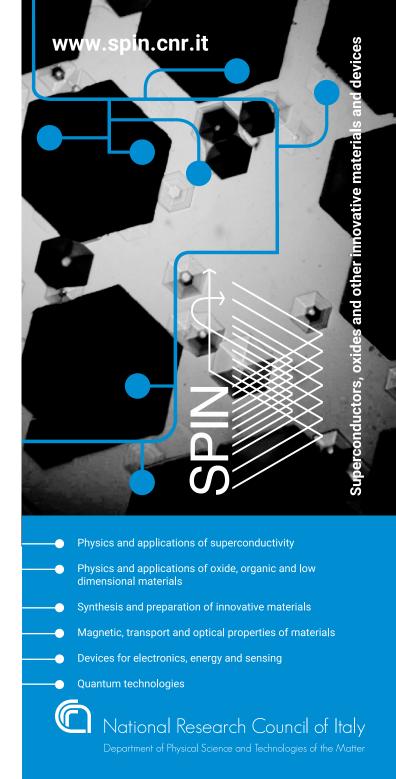
# Salerno

#### **Research Unit**

c/o University of Salerno, Department of Physics Via Giovanni Paolo II 132, 84084 Fisciano (SA) Ph. +39 089 969 328

**Deputy director** Mario Cuoco

## **Facts and figures** 59% Eu/International Average amount of project funds per year ~3 M€ 32% Industrial/ National Commercial Average number of Regional/Local publications per year 275 People **60** Researchers 72 Research Associates SPIN has branches and units located inside the 59 PhD Students & Fellowships Universities. Several PhD and Master **18** Administrative staff members Degree students from 10 Technical staff members Universities are actively involved in the SPIN research activities International collaborations Other countries Genova L'Aquila with (headquarter) Chieti Roma<sup>®</sup> Napoli Salerno Pozzuoli



# **Mission and Organization**

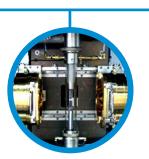
**SPIN** stands for **SuP**erconductors, oxides and other **IN**novative materials and devices. Its mission is the study of innovative materials and their application in the fields of electronics and energy.

SPIN belongs to the **Department of Physical Sciences** and **Technologies of Matter** (www.dsftm.cnr.it) of the National Research Council of Italy (CNR).

# Main equipment

SPIN instrumental endowment mostly covers the following areas:

- Thin film deposition
- Micro and nano-lithography
- Bulk material preparation
- Structural, morphological and chemical characterization
- Optical characterization techniques based on laser sources
- Magnetic, electrical and thermal characterization
- High performance numerical calculations
- Cryogenics
- Scanning probe microscopy
- Mechanical deformation



# Research activities

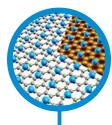


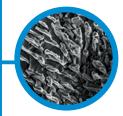
Activity A

Novel superconducting and
functional materials for energy
and environment

## **Activity B**

Superconducting and correlated low dimensional materials and devices for quantum electronics and spintronics





**Activity C** 

Innovative materials with strong interplay of spin-orbital-charge and topological degrees of freedom

## **Activity D**

Light-matter interaction and nonequilibrium dynamics in advanced materials and devices





**Activity E** 

Advanced materials and techniques for organic electronics, biomedical and sensing applications



# **Technology transfer**

Exploiting scientific results, inventions and expertise for the benefit of the industrial production system is one of SPIN strategic goals. SPIN scientists are routinely engaged in joint projects with industrial partners, yet always complying with protection of intellectual property rights. SPIN owns a set of registered patents of major industrial relevance, mostly in the fields of Biomedicine and Applied Superconductivity.

SPIN is actively engaged in several public-private partnerships targeted at fostering technology transfer to Industry: the most significant example is the recent START4.0 Competence Centre, aimed at applying Industry 4.0 enabling technologies for cyber safety and cyber security to the protection of strategic infrastructures of the Genova area.

## **Outreach**

Since the time of its foundation, SPIN has contributed to the organization of dozens of national and international scientific conferences and workshops on different topics. The SPIN scientific community is specifically engaged, in a steady activity of education and dissemination through the organization of schools, conferences and events dedicated to a broader audience on the science and application of innovative materials.







Electronic and thermal transport from the nanoscale to the macroscale