

## From fundamental research to scientific innovation

INRiM, Italy's National Metrology Institute (NMI), is a public research centre.

INRiM carries out and promotes **metrology research**, realizes, maintains, and develops the national reference standards of the **measurement units of the International System (SI)**, necessary for the traceability and for the legal value of the measurements in the sectors of industry, commerce, scientific research, health and environmental protection.

INRiM also enhances, disseminates and transfers knowledge and results in the science of measurements and research on materials in order to promote national technological development and to improve the quality of life and services for citizens.



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# RESEARCH'S FOCAL POINTS

## Environment and clean technologies

We provide measuring methods and instruments to obtain reliable data, thus playing a fundamental role in national and international research programs aimed at protecting the environment and developing clean and sustainable technologies. In particular, we deal with climate monitoring, the detection of pollutants and greenhouse gas emissions.

## Sustainable energy conversion and clean storage

Our instruments allow the development of new devices for energy conversion and storage and for the creation of intelligent distribution networks (*smart grids*), adapted to renewable energy sources.



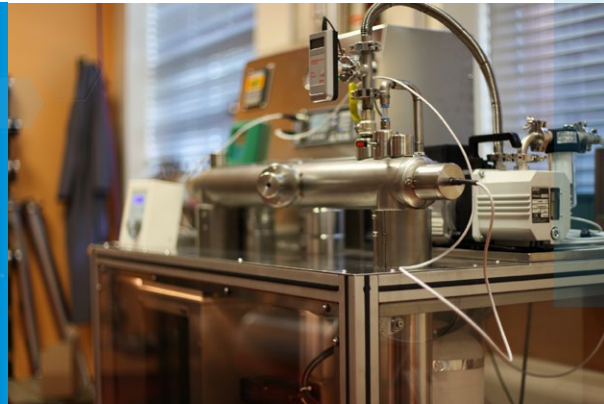
## Quality of life and health

We create measurement techniques, analysis methods, computational tools and technologies based on innovative materials and devices, for applications in the diagnostic and therapeutic fields, with effects in the field of personalized, precision and regenerative medicine. We are committed to monitoring the health risks associated with exposure to electromagnetic fields and toxic substances in the environment and food.



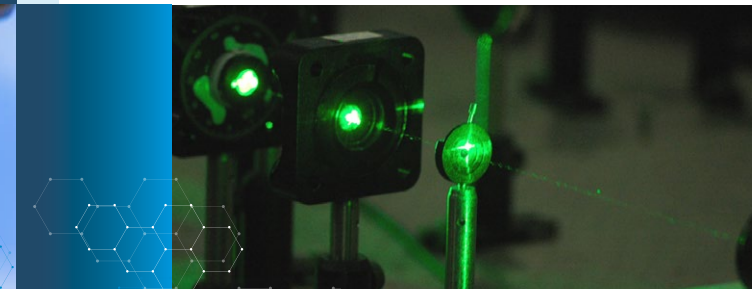
## Digital transformation and industrial transitions

We promote digital transformation, making available our experience in the creation of virtual labs, in the development of a digital certification and in the characterization of industrial sensors, helping to create large-scale sensor networks.



## Technologies for space applications and research

We collaborate with aerospace agencies and industries, supporting, with accurate measurements, the development of satellites, sensors, telescopes, space engines and stabilization technologies. We have contributed to the implementation of Galileo, the European satellite navigation system; we verify the functioning of the atomic clocks on board the satellites; we participate in the Copernicus programme, the most advanced Earth observation system; and we provide support to space missions.



## Fundamental scientific research

Our fundamental scientific research ranges from quantum physics to the determination of the fundamental constants of physics, from the characterization of new materials to the development of advanced spectroscopic techniques, from computational data processing to the identification of specific properties of matter.