MISSIONE 4
ISTRUZIONE
RICERCA

INTEGRATED INFRASTRUCTURE INITIATIVE IN PHOTONIC AND QUANTUM SCIENCES

Finanziato dall'Unione europea
NextGenerationEU

Ministero dell'Università e della Ricerca

Italiadomani
PIANO NAZIONALE DI RIPRESA E RESILIENZA

Panel di riferimento: ***PSE***

Titolo della Proposta: **Integrated Infrastructure Initiative in Photonic and Quantum Sciences**

Codice della proposta: ***IR0000016***

Tipologia: **(iii) - Networking**

Proponente:***CNR***

Infrastruttura di Ricerca: **LENS - Laboratorio Europeo di Spettroscopie Non Lineari**

Importo totale: ***50.000.000,00€***

Di cui al Sud: **20.925.360,21€ (41,85%)**

Abstract:

The "Integrated infrastructure Initiative in Photonic and Quantum Sciences" (I-PHOQS) is a network of leading national research infrastructures proposed by Consiglio Nazionale delle Ricerche and Politecnico di Milano. The participating infrastructures are CNR-LENS (leading the network), CNR-ELI, CNR-Beyond-NANO and POLIMI-CUSBO. Photonics and Quantum Technologies are worldwide recognized as key innovation drivers for highly varied applications and products with an impact on practically many areas of interest. The combined capabilities and services offered by the partners with their long-standing experience in these research topics is the core of the proposal. I-PHOQS will be operated as a unique platform integrating complementary frontier technologies, which allow the network to act and appear as a truly national infrastructure (connecting Northern and Southern facilities) perfectly integrated on a European scale. I-PHOQS will allow investigations aimed at understanding matter and its interactions in nature over wide ranges of distances, energies, and time scales, by combining multiple simultaneous probes within complementary methodological approaches. I-PHOQS strengthens the Italian leading position and competitiveness in scientifically and industrially relevant areas, such as biophotonics, advanced spectroscopy, extreme photonics, quantum sensing and communication and green photonics. I-PHOQS will allow users, from academia and industry, to perform leading-edge and technically demanding laser and matter-based experiments at the most suitable installations. An extensive training program is planned to foster the mobility of students and young researchers. I-PHOQS project has a very large probability of producing innovations in various areas of science and technology. Therefore, the identification of key exploitable results of commercial interest will be a clearly important objective, implemented through innovation management and industry relations.

Elenco partecipanti alla Proposta:

• Consiglio Nazionale delle Ricerche

• Politecnico di Milano