ICFO, The Institute of Photonic Sciences, is a world-leading research center in Photonics hosting more than 250 researchers organized in 23 research groups, working in 60 state-of-the-art research laboratories.

Ten research groups are involved in graphene related activities:

**Opto-electronics**
- Photo-detection and phototransistors
- Transparent conductors, coatings, extraordinary graphene-substrate interactions, Organic LEDs

**Fundamentals**
- Attosecond dynamics in Graphene
- Ultra-fast carrier dynamics, Non-linear optics

**Nano-photonics**
- Plasmonics, metamaterials

**Novel 2d materials**
- Heterostructures of graphene and 2d materials

**Quantum optics**
- Single-photon non-linear optics, Coupling single emitters to nano-photonic systems

**Light harvesting**
- Novel power generation concepts

**Nano-mechanics**
- Graphene quantum nanomechanics
- Force and mass sensing
- Graphene quantum opto-mechanics

**Quantum simulations**
- Artificial graphene, Ultra-fast phenomena

**Artificial graphene**
- Ultra-cold atom gases

**Sensing**
- Force and mass sensing, Bio-sensing

**Key facts**
- Mix of fundamental and applied research
- Numerous Industrial collaborations, patents and prototype-development projects
- Combination of expertise in opto-electronics, nanotechnology, solid-state physics, quantum optics, and nano-photonics.
- 14 European Research Council (ERC) projects
- Graphene flagship: WP optoelectronics (deputy leader) and WP sensors

**Access to resources**
- Cleanroom with state-of-the-art fabrication tools for nano-electronic and nano-photonic devices (e.g. 2 EBL systems, Laser writer, 3 Evaporation systems, ALD, RIE, etc.)
- Fabrication facilities for graphene and 2d materials: Aixtron CVD machine, deterministic transfer setups, solution deposition, liquid phase and hot press transfer equipment.
- Advanced imaging characterization tools: near-field plasmon imaging, low-temperature and high-resolution opto-electronic characterization for visible and infrared light
- Characterization of optical materials and components for fundamental and industrial research projects.

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