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## **CNR-IFN micro and nanofabrication facility: from high resolution electron beam lithography to macroscopic soft litografies**

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The micro and nanofabrication facility of CNR-IFN (site of Rome) is a full equipped laboratory for nanotechnology, advanced device fabrication, nano-fabrication and advanced characterisation techniques. The IFN has developed expertise and facilities in nanofabrication and characterization of electronic and spintronic nanodevices, superconducting single-photon detectors, Photonic Crystals and single-QD devices, and also devices for biological applications. The researcher in the unit of CNR-IFN have a well-established expertise in micro and nanofabrication processes and in particular in the electron beam lithography (EBL). The CNR-IFN (formerly IESS) has been the first public research institute in Italy to have installed an EBL system in 1986 and since then the e-beam lithography has been one of the main activity of the institute. The EBL system now presents in the institute is a Vistec EBPG 5HR working at 100kV (spot diameter 8 nm; positioning accuracy 20nm). All the facility capabilities and current collaborations with academic and industrial partners will be described.

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