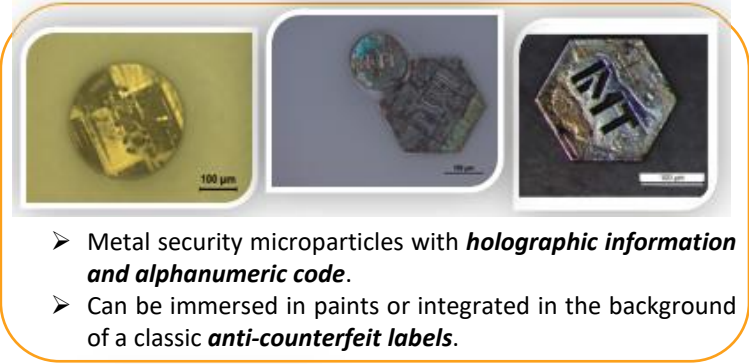
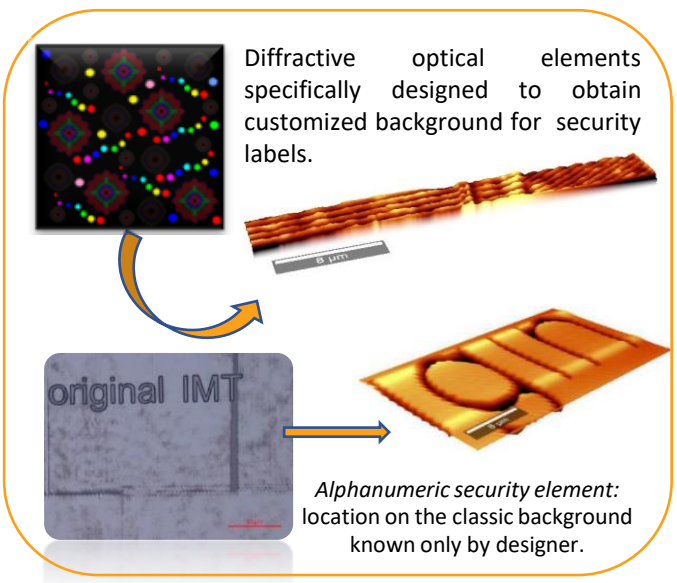




PARTNER PRESENTATION AND INTEREST IN HORIZON EUROPE PARTICIPATION

Combined technologies for the development of new generation smart anti-counterfeit tags



Short description of Laboratory:

- **Mission: Research, development and education in micro and nanophotonics**
- **Research domains:**
 - **Modelling, simulation and CAD of micro and nano-photonic structures** (Optoelectronic devices and photonic integrated circuits; Plasmonics; Micro-optics and diffractive optical elements; OMEMS).
 - **Optical and electrical characterization of materials and devices:**

New materials for micro-nanophotonics (hybrid nano-composites with controlled optical properties, transparent semiconducting oxides, Graphene, quantum dots) **and new processes and devices.**

Micro-nano photonics components (photodetectors, photonic integrated circuits, metasurfaces, plasmonic structures, DOE, optical components); **Organic optoelectronics** (devices based on graphene-polymer nanocomposites) **and quantum technologies.**

- **Applications:**
 - * **Optical sensors** (gas sensors based on composite nanomaterials/metasurfaces, fluorescent biosensors) *
 - Security elements for anti-counterfeit protection and logistic monitoring** (holographic labels with extra security nanoelements, RFID elements and temperature sensor); *
 - Free space optical communications, * Beam shaping.**

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Topic of interest: new generation security labels, new materials for micro-nanophotonics, new processes and devices; micro-nano photonics components for various applications

Potential contribution: design, modeling, simulation, fabrication, characterization of photonic and optical components