FIT4NANO—Focused Ion Technology for Nanomaterials

COST Action: CA-19140

https://www.fit4nano.eu

The aim of the Action is to create a coordinated effort in the field of ion beam based nanoengineering that will put European researchers and commercial businesses at the forefront of the quickly moving field of functional nanostructured materials. The Action will unite developers and practitioners of focused ion beam technology to enable them to build the most efficient tool sets and application techniques for the identification, fabrication and characterization of next generation functional nanomaterials. The Action will develop ion sources and instrumentation for the sub 10 nm fabrication and materials analysis. These objectives will be reached through Europe wide networking between researchers from theoretical and experimental groups traditionally not interacting closely. The challenge to overcome is the increasing fragmentation of the FIB landscape between operators of established technologies, developers providing new techniques and methods and designers of functional nanomaterials not aware of the possibilities provided by these emerging focused ion beam technology and methods. A tight feedback loop between academic and commercial technology developers with researchers of fundamental ion solid interactions and scientists developing new functional nanomaterials will be formed through a series of conferences, training schools and short term scientific missions. This will enable European researchers to develop bleeding edge functional nanomaterials allowing them to offer solutions to many of the important socioeconomic questions defined by the various research programs in Europe. New and emerging focused ion beam technology developed by the Action will play an important role for Quantum Technologies, Semiconductor Industry, Functional Nanomaterials and Medical applications.