Federico Ferrarese Lupi graduated in Physics of Advanced Technologies at the department of physics of the University of Turin in 2008.
In 2012 he received his PhD in Physics “Cum Laude” at the university of Barcelona, discussing a thesis entitled “Optically active substoichiometric $Si_3N_4$ □-cavities for sensoristic applications”. Between 2012 and 2015 he worked as postdoctoral fellow at the MDM laboratory of the IMM–CNR institute in Agrate Brianza. During that period he focused on the fabrication of self-assembled nano-structures using block copolymers and its integration with the next generation of electronic devices.
Currently Federico Ferrarese Lupi is researcher in the Nanoscience and Material division of INRiM, the Italian National Metrology Institute located in Turin. He is in charge of the nano-fabrication processes in the group of Luca Boarino. He is involved in several European metrology projects covering different aspects of the fabrication and characterization of materials and objects at the nanoscale.
His main research activity is focused on the optical characterization (luminescence, lifetimes, propagation loss, optical gain, etc.) and nano-patterning (through the self-assembling systems) of polymeric and Silicon-based materials with potential application in nanometrology. The main goal such investigation is to develop nanostructured model systems useful in several metrological fields such as the length metrology, the 3D chemical analysis and bacteria detection.
Federico Ferrarese Lupi is member of the Italian macromolecules association (AIM) author or co-author of more than 40 scientific papers and 2 patents.