Graftonica produces and markets nanotech additives to meet the evolving needs of the rubber and plastics industry. Additives produced by Graftonica are easily dispersed in polymers that can be provided as masterbatches. They improve the performance of polymer products, making them suitable for applications currently reserved to other classes of materials providing smart solutions:

- High dielectric constant materials for electronics;
- Water and gas barrier for food packaging;
- High refraction index transparent materials for optics and photonics;
- Modulated scattering materials for lighting;
- UV coatings for conservation and restoration of cultural heritage;
- Biocompatible and biomimetic materials for implants, prosthetics, phantoms.

Since its foundation in February 2015, Graftonica has expanded its operations by hiring young and talented collaborators and acquiring new instruments to provide prototype materials to companies in Italy and abroad.

**PRODUCTS & SERVICES**

Graftonica has developed a methodology for the compatibilization and dispersion of inorganic nanofillers inspired by state of the art scientific concepts («lab on a particle»). The methodology combines the functional properties of nanoparticles with the structural properties of the polymer. The compatibilization technology can be applied on a wide range of commercial products, as well as on custom made nanoparticles and on metal surfaces. In particular, Graftonica for UV coatings is the licensee of a patent owned by the University of Milano-Bicocca and by Fondazione Cariplo.

The Graftonica offer includes:

- Nanocomposite masterbatches with predispersed additives;
- Custom synthesis of polymer and copolymers;
- Compounding of third party polymers and nanoparticles with twin-screw extruder;
- Surface functionalization of metals;
- Nanoparticle enhanced paints and coatings.

As part of an integrated approach to develop and prototype innovative materials, Graftonica can also provide analysis and deformulation of existing materials, including:

- Failure analysis;
- Scale up of processes and reactions from literature.