PLUME S.r.l. develops produces and sells high-tech products and services based on plasma technologies.

Our main goal is to offer plasma based surface modification processes including:

- **Functionalization of flexible materials** like, for example, fabrics, plastic films, polymeric membranes and 3D objects. This technology can include both plasma treatment and nano-sized coating deposition;
- **Nanostructured thin film deposition** made of metals or metal oxides for application in sensor and photovoltaic fields;
- PLUME can rely on a wide range of equipment at the Milano-Bicocca University, suitable for the development and validation of plasma processes from the lab up to industrial scale. A wide experience of the team in the field of R&D, operated with and for productive world, completes PLUME profile.

**PRODUCTS & SERVICES**

**Filtration:** PLUME offers an innovative, *cold plasma based process for the surface treatment* of flexible filtration media. A typical application is the separation of oils and water.

**Films and textiles:** Easy to integrate in the productive line, *atmospheric plasma treatment of flexible substrates* can be applied in multiple industrial sectors, such as packaging, medical, textile, electronic.

**Textile industry:** Atmospheric plasma for the functionalization of fabrics, yarns and fibers, both natural and synthetic.

**Advice:** Design of on-demand solutions for industrial customers. Development of *cold plasma processes* and technologies. Realization of prototypes. Materials and surface analysis facilities (electron and atomic force microscopy, chemical composition, surface tension, adhesion).

**R&D:** We operate in a dynamic context in relationship with Italian and foreign Universities. We ideate innovative technological solutions and we realize prototyped systems based on cold plasma.