



Electrospinning is nowadays internationally recognized as one of the key nanotechnologies of the future. Electrospinning is currently the most economic, versatile, and efficient technology to fabricate materials made of nano and/or micro fibers aiming at producing highly porous membranes and matrices. Pore dimensions and fiber surface topology can be modulated. In contrast with other conventional textile techniques, electrospinning can be applied to a broad variety of materials: synthetic and natural polymers, inorganic materials, etc.

The process behind this technology is based and ruled by highly complex phenomena that require electrostatic, automation, mechatronic, physics, chemistry, and macromolecular chemistry competences.

The application fields range from the biomedical sector (artificial meshes for wounds, scaffolds for tissue engineering, matrices for controlled drug delivery...), to the filtration field (micron and sub-micron particle separation, high efficiency filters...). Other applications include composite materials, (bio)sensors, and electronics.