# Glossary

**Artificial extracellular matrices** are the engineered biomaterials that partially or fully mimic the composition, structure/morphology, and function of the in-vivo extracellular matrices.

**Biopolymers** are long chain molecules produced by the cells of living organisms.

**Cleanrooms** are facilities designed to maintain extremely low levels of particulates, such as dust, airborne organisms, or vaporized particles, and used for specialized industrial production or scientific research.

**Etching masks** are films on top of substrates with predefined patterns, which are more resistant to specific etchants than the substrates, for the selective removal of substrate materials according to the patterns.

**Lab-on-a-chip** is a device that integrates one or several laboratory functions on a circuit  called a "chip") of a few square centimeters.

**Micro Total Analysis Systems** (µTAS) describe microscale systems that include and automate all necessary steps for chemical analysis of samples, e.g. sampling, sample transport, filtration, dilution, chemical reactions, separation and detection.

**Microactuators** are microscopic devices capable of generating mechanical motion of solids or fluids.

**Microcontact printing** is a type of soft lithography procedure where a microstructured elastomeric stamp is inked with a material solution to be then deposited by direct contact with the surface of the substrate.

**Micro-Electro-Mechanical Systems (MEMS)** are microsized systems consisting of miniaturized mechanical and electromechanical elements made by microfabrication techniques.

**Microenvironments** are the micrometer range environments of cells.

**Microfabrication** is a process that consists of designing , production, and characterization as well as application of patterns/structures, devices, and systems at the micrometer scale.

**Microfluidics** is the science and art on studying and engineering the behavior of small (often less than cubic millimeters) amounts of fluids.

**Mix-pour-cure-peel sequence** is a sequence of PDMS microstructure fabrication.

**Photo(-reactive) resins** are polymeric resins the solubility of which in the solution of a subsequent ‘development’ step changes when exposed to light, often in the ultraviolet or region.

**Photolithography** is a process used to create patterns on a photosensitive polymer film by selective exposure to light through a mask and subsequent ‘development’ using chemical agents.

**Photomasks** are plates used in photolithography with selective, patterned transparencies to allow light to pass selectively.

**Polydimethylsiloxane (PDMS)** is awidely used elastic polymer used for the fabrication of microfluidic devices or molds, stamps or masks for soft-lithography.

**Soft-lithography** is a set of techniques used to fabricate micro- or nanoscale structures by molding or transfer of materials onto substrates using elastomeric, “soft” molds or stamps.

**Tissue micromolding** is a process where biopolymers are molded into tissue like shapes.

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