



Perfect materials for demanding applications

UpNano's high performance 2-photon materials are engineered and optimized to utilize the full potential of the ultrafast high-resolution printing system NanoOne®.



Universal performance material for ultrafast fabrication of parts ranging from micro to mesoscales with delicate features including undercuts and micropores. Aside from lattices structures even solid body volumes can be produced. Using the vat mode, parts with z-dimensions of more than 50 mm can be fabricated.



Sol-gel hybrid material for complex overhanging structures with sub-micron resolution and low shrinkage. UpSol is processed in gel state permitting top-down fabrication within the working distance of the respective objective. The gel is serving as sacrificial support for the printed structure.



Gelatin-based hydrogel material for biological applications and bio-printing. UpBio allows the fabrication of micro and mesostructures such as scaffolds, membranes or microchannels and even permits 2-photon 3D printing in the presence of living embedded cells. UpBio is engineered as easy-to-use kit and can be processed in both liquid and gel state.

Dip-in free process

In the UpNano process, the resin is separated from the objective by a high-precision glass plate.

Independent resin processing

Besides protecting the objective, a wide variety of resins with different refractive indices can be processed independently of the immersion medium.

Resins for micro to mesoscale printing

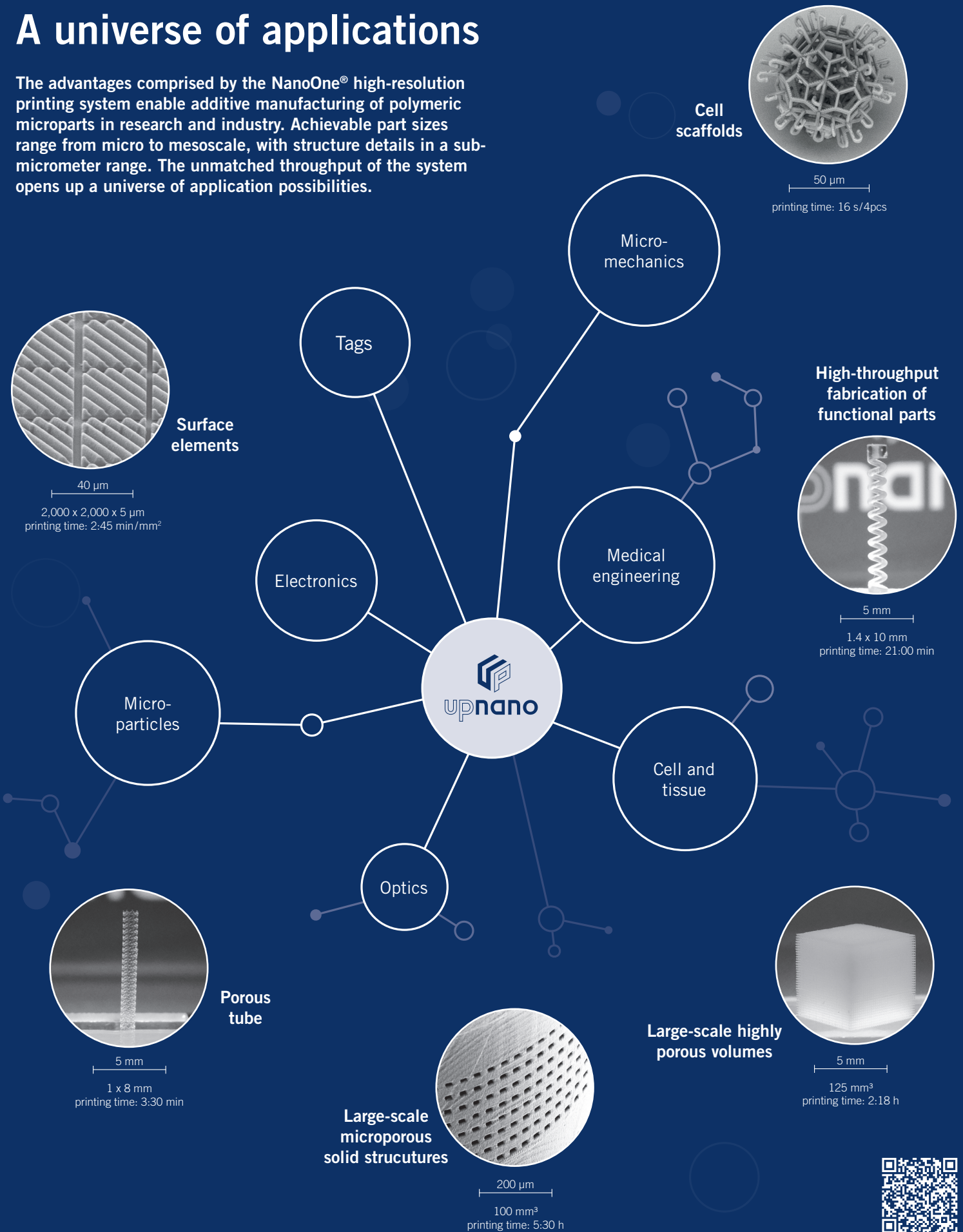
The current selection of materials includes a photopolymer resin and a hybrid material for micro-to meso-scale printing as well as a hydrogel kit for biofabrication in the presence of living cells.

Unrestricted freedom of design

The vat-based process eases material handling and enables unrestricted freedom of design.

A universe of applications

The advantages comprised by the NanoOne® high-resolution printing system enable additive manufacturing of polymeric microparts in research and industry. Achievable part sizes range from micro to mesoscale, with structure details in a sub-micrometer range. The unmatched throughput of the system opens up a universe of application possibilities.



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