



Two-photon polymerization 3D printing for micro-/nanostructures

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UpNano GmbH is a high-tech 3D printing company headquartered in Vienna, Austria. The company manufactures and sells high resolution 3D printers under the NanoOne platform which are capable of printing parts with a wide-range of resolutions and volumes, from 160nm lines to 40x40x40mm and 4" wafer batch production.

Typical user applications are microfluidic chips, bioprinting, microneedles, micro optics and medical devices. The combination of a very strong 1000mW femtosecond laser and the unique vat-design enables novel material development with polymers normally not associated with 2-photon printing.



Henrik Akesson is the Chief Business Officer and Head of Global Sales at UpNano GmbH. Trained as an engineer in Sweden, he spent 15 years in the Asian semiconductor and display manufacturing industry solving key issues for Samsung, SONY, LG, TSMC, Intel, SHARP and others. He was an integral part of the flat screen revolution and the continuous production achievements that were made at the time. During this work, he discovered the potential in 2-photon polymerization as a better means to create structures in 3D than the classic laser lithography. After 10 years in Germany and Austria, working in commercial, sales, and business development roles in software and 3D printing, he is now a frequent speaker and a champion for the micro-factories concept where whole production and assembly lines can be made in millimeter size for micron parts.