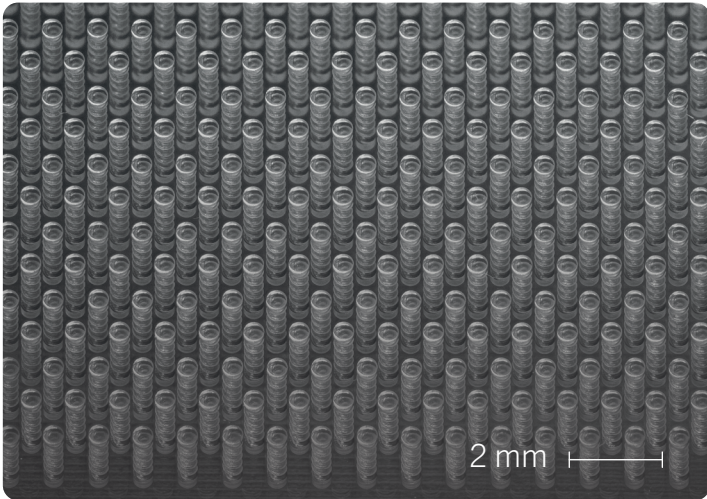


nanopro

Industrial micropart production
utilizing high-resolution 2-photon
polymerization 3D printing technology



The NanoPro edge: why our customers benefit

Choosing a new production partner can be daunting given the many considerations including cost, quality, reliability and speed.

We've developed NanoPro with these factors in mind to deliver a solution that works harder for our customers, easing the production burden and providing more time to focus on the critical aspects of your business.

We strive to build long-lasting partnerships through close cooperation and integration with our customers.



First and only 2PP 3D printing service for industrial production of polymeric microparts



Optimized polymer materials or custom material development support available



Exclusive, customizable part production



Confidential working relationship under NDA



No CapEx investment



Seamless integration into the customer's production line



UpNano invests in the manufacturing site, therefore eliminating for you:

- Maintenance/upkeep
- Cleanroom facility and certification
- Post processing equipment (washing, drying, packaging)
- Metrology and inspection



Risk assessment by UpNano guarantees:

- Stable and reproducible process
- Consistent delivery and shipment of required volume on time and within specification
- Backup equipment
- Safety stock
- Rapid and flexible scaling
- Quality assurance and control



UpNano provides experts experienced in highly complex 2PP 3D printing technology, including:

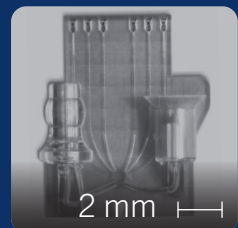
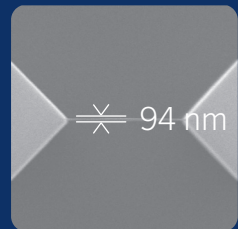
- Software efficiencies, including software adaptation for specific product needs
- Product CAD design optimizations to improve print quality and cycle time
- Tailored materials and assistance with evaluation of material properties as needed
- Print process and parameter development with verification and validation

Is NanoPro right for you?

- ❓ Are you in need of further miniaturization of production parts?
- ❓ Are your industrial microparts too small or complex for current technology?
- ❓ Microinjection molding or milling manufacturing options cannot handle your tolerances or design requirements?
- ❓ Your high-volume need of polymeric microparts cannot be satisfied today?

NanoPro is the solution

- ✅ Complex microstructures with unlimited design space
- ✅ No tooling or post curing required
- ✅ Unmatched tolerances below 100 nm and smallest feature size below 100 nm
- ✅ Industrial-scale quantities produced by the highest performance 2PP 3D printing technology on the market
- ✅ Reduce assembly steps, print entire structures in one go



Our process: from kick-off to production

nanoOne

Your prototyping and batch production 3D printer



These initial steps should take place utilizing the NanoOne prototyping machine. With a **NanoOne** machine in-house at the customer's facilities, the feasibility and early process development steps can be handled in a more hands-on way internally. Support from UpNano's engineering and design department are available

Initialization

- Initial customer contact
- Status or project plan
- Technical specifications
- Economic requirements
- Material requirements

Feasibility

- First experimental tests
- General feasibility testing
- Basic adaptation of geometry
- Basic material selection
- First cost estimate (cost per piece)

fully along the way. If needed, these steps can also be done with NanoOne machines on location at UpNano, executed by UpNano experts in collaboration with you.



Process development

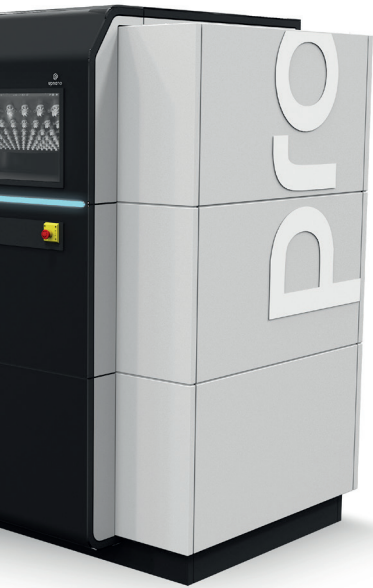
- Screening of process parameters
- Optimization of print quality, print time, and post processing
- Freeze of geometry/material
- Calculation of final cost per piece

Tech transfer

- Production test runs
- Verification and validation runs
- Yield calculation
- Risk analysis

nanopro^{VT}

Our industrial production 3D printer



The later steps of the process transition the development of the micropart(s) to the **NanoPro VT** print system, owned by UpNano and managed by our experts. After careful validation runs, commercial production can kick off.

Production

- Commercial production
- Quality control, packaging, shipment
- KPIs



Watch video



Download brochure



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