

## 3D Laser Nanoprinting

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It has become routine to print out any text or any color graphics within seconds upon the push of a button by using tabletop 2D printers. By analogy, tabletop 3D printers might someday allow to obtain any material, device, or system upon the push of a button. On the macroscale, 3D printing – or, more generally, 3D Additive Manufacturing – is already a megatrend worldwide.

In this talk, I will give an introduction into laser based 3D printing on the micro- and nanoscale and describe the state-of-the-art. I will emphasize the challenges of finer features below the diffraction barrier, scalable and faster printing, and of multi-component architectures. Application examples include micro-optical components, metamaterials, scaffolds for biological cell culture, and 3D security features.