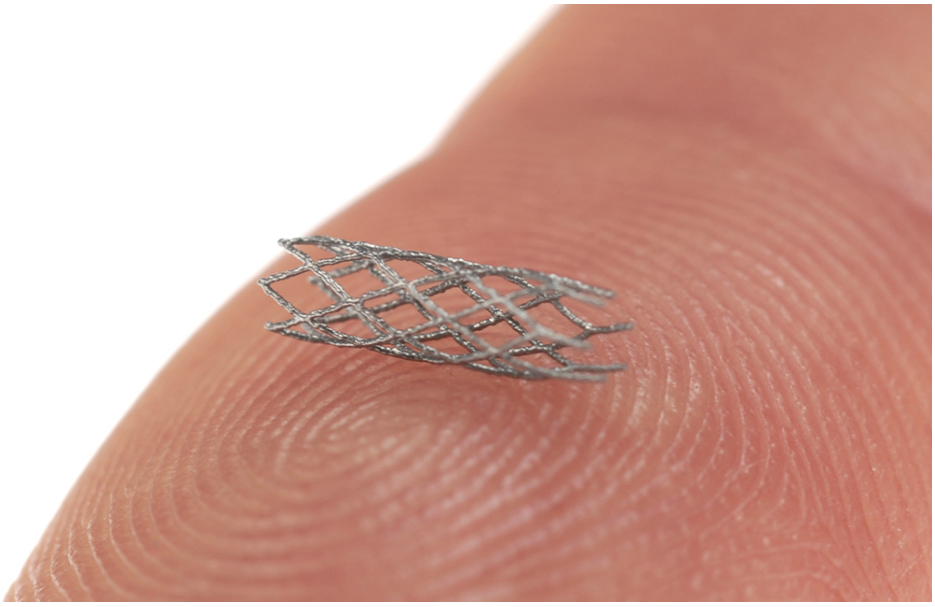
Implants out of the 3-D printer



Auf einen Blick

- ☑ Selective Laser Micro-Melting allows for individual implants
- ☑ Established processes for nickel-titanium, platinum-iridium and stainless steel
- ☑ Applications are cardiac pacemakers, shape changing implants and stents
- ☑

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LZH | Additive manufacturing processes at the micro-scale open the doors for new approaches in medical technology to produce implants. The Laser Zentrum Hannover e.V. (LZH) develops processes for the manufacturing of platinum, nickel-titanium (NiTi) and stainless steel.

For this purpose, the scientists of the Surface Technology Group used a special 3-D printing method – the Selective Laser Micro-Melting (SLµM). By means of partly customized systems, they succeeded in coating electrodes for cardiac pacemakers with platinum, and manufactured three-dimensional lattice structures from NiTi and stent prototypes from stainless steel and NiTi.

SLµM makes it possible to adapt stents and implants individually to the patient's requirements, and can open up new perspectives in the field of medical technology in the future.

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