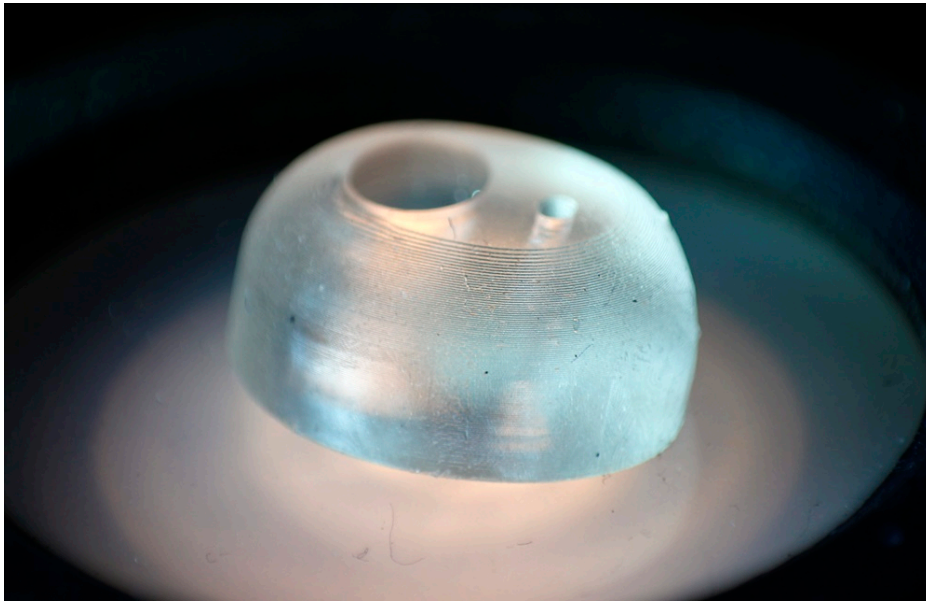


Printing hearing aids with customized hardness zones



Auf einen Blick

- LZH develops prototype of an aerosol-jet system for multi-material printing
- Printed layers of different or mixed liquid polymers
- Comfortable earmolds with customized hardness zones

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LZH | Individually shaped earmolds are already commercially available, but do not take into account the varying tissue hardness in the ear canal. In a joint project on multi-material printing, the Laser Zentrum Hannover e.V. works on hearing aids with customized hardness zones.

Besides its individual geometry, the ear canal has hard and soft tissue regions. To improve the wearing comfort of mold fittings for hearing aids, so-called earmolds, the hardness of the material must be locally adjustable.

To print earmolds with hard and soft regions, the Production and Systems Technology Department at the LZH is developing a new 3D printing process that is based on a layer-by-layer spraying of the material. If two nozzles are used with polymers of different hardness degrees, a hardness of between 55 and 75 ShoreD can be achieved.

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