

UV Nanoimprint

December 6 2004



The german WDR (Westdeutscher Rundfunk) has reported in its science magazin Q21 about **the fabrication of nano sized structures by UV Nanoimprint**. The technology is decriped on the example of a miniaturized page of Gutenbergs Bibel which has been fabrictated in AMO (AMICA).

The story in german can be found on the [webpage of Q21](#).

UV Nanoimprint is a low cost fabrication technology for nanoelectronic and photonic devices with dimensions far below 100 nm. AMO develops process technology and optimizes the tool platform since several year aiming for the comercialisation of this next generation lithography technology.

About UV Nanoimprint:

Nanoimprint lithography (NIL) has received considerable interests in the last few years for fulfilling the demands of low cost and high resolution nano lithographic technique. Conventional NIL processes, however, coined as stamp and step processes require thermal cycles between 140°C and 180°C and high pressures during the hot embossing procedure. Thermal and mechanical loads involved in these processes represent a nearly prohibitive burden for fast and high precision alignment. The mechanical masses to be moved in high throughput equipment require a large degree of complex mechanical handling.

A new UV based nanoimprint lithography (UV-NIL) has been developed and demonstrated at AMO as attractive alternative to the hot embossing technique. The low pressure (

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