Micro and Nano structuring of Silicon at DTU Danchip

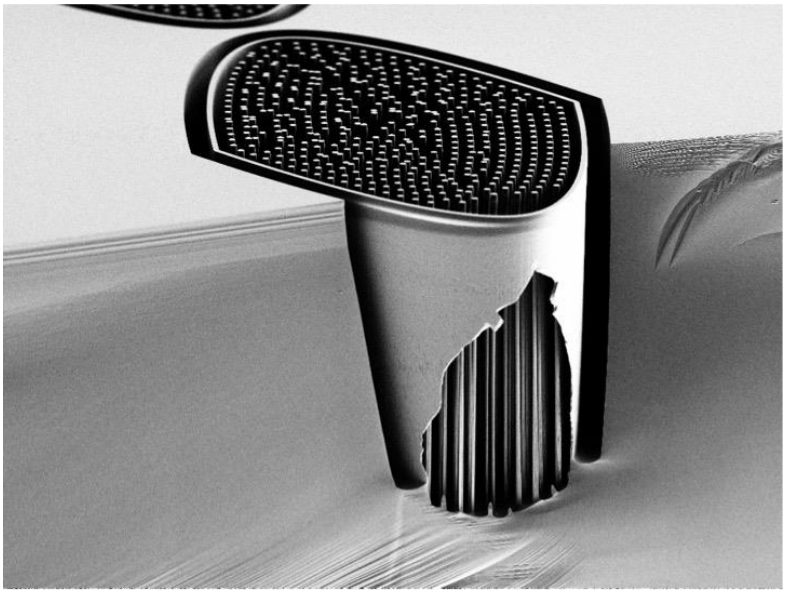
by

Prof. Dr. Jörg Hübner

Director: DTU-Danchip
Technical University of Denmark, Denmark

ABSTRACT

Etching of silicon is the basic technology step for a large variety of MEMS, NEMS, and microfluidic applications. Even the fabrication of large area nanostructure in polymers starts in our examples with lithography and etching of silicon. After a short introduction to DTU Danchip (Clean Room), the talk will focus on plasma etching of silicon in detail. The plasma chemistry and physics during silicon etching poses challenges and opportunities, which will be demonstrated using examples reaching from nanopillars for SERS enhancement to X-ray compound lenses. A short excursion into Atomic Layer Deposition and some results on structures realized with this very versatile technology will be presented and accordingly discussed.



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