

Deep reactive ion etching techniques for micro and nanotechnology

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Nanosize vertical silicon structures with high aspect ratio are crucial for many applications, such as photonics, optical waveguides, microfluidics, DNA separation, heat dissipation, MEMS etc. Different techniques can be used to better fit final device requirements.

In this contribution an overview of different approaches will be presented. Classical and modified Bosch process, Core process, vapor HF etching, High density radical flux process and Atomic Layer Etching will be discussed and compared with their positive and negative aspects.