Special Issue

Micro- and Nano-Fabrication by Metal Assisted Chemical Etching, Volume II

Message from the Guest Editor

Metal assisted chemical etching (MacEtch) has recently emerged as a new etching technique capable of fabricating high aspect ratio nano- and micro-structures in a few semiconductor substrates—Si, Ge, poly-Si, GaAs, and SiC—and using different catalysts—Ag, Au, Pt, Pd, Cu, Ni, and Rh. Several shapes have been demonstrated with high anisotropy and feature size in the nanoscale—nanoporous films, nanowires, 3D objects, and trenches, which are useful components of photonic devices, microfluidic devices, bio-medical devices, batteries, Vias, MEMS, X-ray optics, and so on. With no limitations of large-areas and low-cost processing, MacEtch can open up new opportunities for several applications where high-precision nano- and micro-fabrication is required. This can make semiconductor manufacturing more accessible to researchers in various fields and accelerates innovation in electronics, bio-medical engineering, energy, and photonics. Accordingly, this Special Issue seeks to showcase research papers and review articles that focus on novel methodological developments in MacEtch, and its use for various applications.

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