

## Fabrication of Positive and Negative Structures via Scanning Probe Lithography

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Scanning probe lithography (SPL) has been recently applied to produce a variety of multilevel-structure and to fabricate small component of the miniaturized device, because a site-defined small features (<100 nm) with spatial resolution can be repeatedly formed at a low cost, as compared with the conventional lithography techniques. The area patterned by AFM anodic oxidation has different chemical properties from the non-patterned area, and thus site-selective modification of patterned surface is quite possible. In this study, we combine the SPL with self-assembly method and/or wet etching method for the fabrication of positive and/or negative 3D micro/nano-structure. These locally modified surfaces could then be used to induce the site-selective self-assembly of various materials (i.e., nanoparticles, biomaterials) based on a pre-described pattern.