Micro/nano Structured Hydrophilic Polymer by Soft Lithographic Techniques

박성준, 이동훈, 홍난영, 김동표*
충남대학교
(dpkim@cnu.ac.kr*)

We fabricated novel hydrophilic micro/nano structures on Si substrates using a patented hydrophilic hybrid polymer with excellent processability by soft lithography methods such as the imprinting lithographic technique and micro transfer molding (μTM). Nanoscaled hydrophilic polymer patterns were fabricated with economic nanoscale CD, DVD and Blue ray Disc (BD) masters using imprint lithography. It is interesting that the contact angle of the patterned surface was significantly increased to ca. 53°~77°, depending on the relief morphology, in contrast to the contact angle of ca. 10° of the smooth thin film. Double-layered microstructures of the hydrophilic polymer were fabricated using micro transfer molding lithography.