

Rigiflex Lithography: An Overview

서동철, 서갑양, 강달영, 최세진, 박세영, 윤현식, 최준호, 이홍희*
서울대학교 화학생물공학부
(honghlee@snu.ac.kr*)

Unconventional lithographies based on a patterned mold, unconventional in the sense that they are not photolithography, have drawn much interest since the mid nineties because of the possibility of patterning device features down to sub-10 nm range cheaply and simply over large area. Better known among these are imprint (hard) lithography and soft lithography. Because of the nature of the mold material, the hard (imprint) lithography cannot be readily applied over a large area whereas the soft lithography is limited in its resolution, only down to several hundred nanometers.

Rigiflex lithography based on a rigiflex mold, a mold rigid enough for sub-10 nm resolution and yet flexible enough for large area application in its film form, overcomes the shortcomings of the hard and soft lithographies. Presented here is an overview of the rigiflex lithography. Of the various techniques belonging to this rigiflex lithography, the evolution of capillary force lithography and the implication of pattern transfer technique are presented in detail.