

ABSTRACT

Various embodiments of the present technology generally relate to substrate planarization. More specifically, some embodiments of the present technology relate to versatile systems and methods for precision surface topography optimization known as planarization on nominally planar substrates. In some embodiments, a method for planarization of a patterned substrate using inkjets can determine the global and nanoscale topography and pattern information of the patterned substrate. Based upon the global and nanoscale topography and pattern information, a drop pattern can be determined and then dispensed on the patterned substrate. A gap between the patterned substrate and a superstrate causing the dispensed drops can be closed to form a substantially contiguous film. The substantially contiguous film can be cured and the superstrate can be separated from the patterned substrate with substantially contiguous film on the patterned substrate.

Fig. 7