ABSTRACT

TOPOGRAPHY DIRECTED PATTERNING

A pattern having exceptionally small features is formed on a partially fabricated integrated circuit (102) during integrated circuit fabrication. The pattern comprises features (186), (188) formed by self-organizing material, such as diblock copolymers. Diblock copolymers, composed of two immiscible block species, are deposited over and in the space between the guide features (152). The copolymers are made to self-organize, with each block species aggregating with other block species of the same type. The self-organized blocks (186), (188) are formed in spaced-apart groups. Between the groups are features 114, which were defined by earlier-formed blocks of self-organizing material, such as additional diblock copolymers.

Figure. 23