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(54) Title: POLISHING PAD AND METHOD OF USE THEREOF

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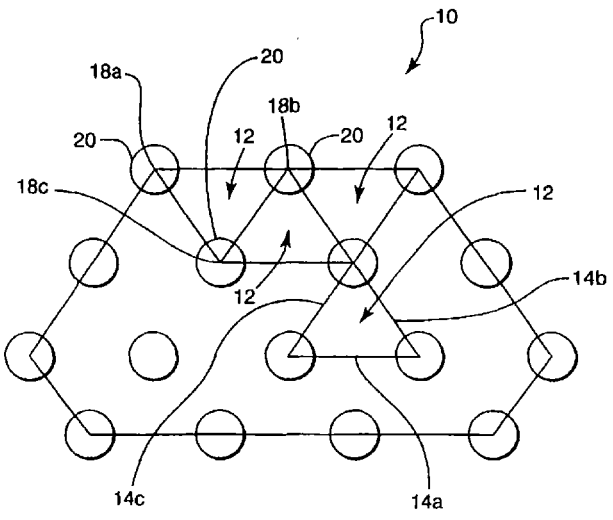

(57) Abstract: A method of chemically modifying a wafer suited for fabrication of semiconductor devices includes a) contacting a surface of wafer with an article (10) that includes a plurality of unit cells repeating across the surface of the article, the individual unit cells (12) including at least a portion of a three-dimensional structure (20) and being characterized by a unit cell parameter as follows: $[[V_1\text{-}Vs]/Aas]/\sqrt{Auc}>5$ where V_1 is the volume defined by the area of the unit cell and the height of the structure of the unit cell, Vs is the volume of the structure of the unit cell, Aas is the apparent contact area of the structure of the unit cell, and Auc is the area of the unit cell, and b) moving at least one of the wafer and the article relative to each other in the presence of a polishing composition that is chemically reactive with a surface of the wafer and capable of either enhancing or inhibiting the rate of removal of at least a portion of the surface of the wafer.

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