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(54) Title: LINE EDGE ROUGHNESS REDUCTION FOR TRENCH ETCH

(57) Abstract: A method for etching a trench (314, Fig. 3B) to a trench depth (318, Fig. 3B) in a dielectric layer (308, Fig. 3B) over a substrate (304, Fig. 3B) is provided. An ARC (310, Fig. 3B) is applied over the dielectric layer (308, Fig. 3B). A photoresist mask (312, Fig. 3B) is formed on the ARC (310, Fig. 3B), where the photoresist mask has a thickness. The ARC is etched through. A trench (314, Fig. 3B) is etched into the dielectric layer with a dielectric to photoresist etch selectivity between 1:1 and 2:1.

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