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(54) Title: LOW CAPACITANCE DIELECTRIC LAYER ETCHING USING HYDROGEN-NITROGEN PLASMA

(57) Abstract

A method for etching through a low capacitance dielectric layer in a plasma processing chamber. The low capacitance dielectric layer, preferably an organic material like parylene, BCB, SILK, FLARE is disposed below a hard mask layer on a substrate. The method includes flowing an etch chemistry that includes N_2 and H_2 with optional addition of oxygen-containing gas into the plasma processing chamber and creating a plasma out of the etch chemistry. The method also includes etching the low capacitance dielectric layer through openings in the hard mask layer which may be patterned in the same chamber using fluorocarbon chemistry.

