METHODS FOR FORMING HIGH ASPECT RATIO FEATURES ON A SUBSTRATE

ABSTRACT

Methods for forming anisotropic features for high aspect ratio application in etch process are provided. The methods described herein advantageously facilitates profile and dimension control of features with high aspect ratios. In one embodiment, a method for anisotropic etching a dielectric layer on a substrate includes providing a substrate having a patterned mask layer disposed on a dielectric layer in an etch chamber, supplying a gas mixture including at least a fluorine and carbon containing gas and a silicon fluorine gas into the etch chamber, and etching features in the dielectric layer in the presence of a plasma formed from the gas mixture.

(Fig. 3)