ETCHING METHOD AND SUBSTRATE PROCESSING APPARATUS

ABSTRACT

Irregular features are reduced during etching. An etching method includes (a) providing a substrate including a silicon-containing film comprising nitrogen and a mask on the silicon-containing film, and (b) etching the silicon-containing film to form a recess. The mask includes at least one opening. The step (b) includes (b1) etching the silicon-containing film with a first plasma generated from a first processing gas including a fluorocarbon gas. The fluorocarbon gas has a highest flow rate among components of the first processing gas. The step (b) includes (b2) etching the silicon-containing film with a second plasma generated from a second processing gas including a hydrogen fluoride gas.

Fig. 6