ETCHING METHOD AND PLASMA PROCESSING APPARATUS

ABSTRACT

An etching method and a plasma processing apparatus form a recess with an intended shape. The etching method includes (a) providing a substrate including a silicon-containing film and a mask on the silicon-containing film. The silicon-containing film including a first region and a second region having a boundary therebetween as viewed in cross section in a direction perpendicular to a plane direction of the substrate. The boundary includes a slope extending in a direction inclined with respect to the plane direction. The method further includes (b) etching, after (a), the first region with first plasma generated from a first process gas to form a recess, (c) supplying, after (b), second plasma generated from a second process gas containing tungsten to the substrate, and (d) etching, after (c), the recess with third plasma generated from a third process gas. The recess crosses the slope in the cross section after (d).

[FIGURE 3]