1. Title:	Etching characteristics of multi-stack EUVL mask structure using inductively coupled plasma
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3. Abstract body:

Currently, EUVL (extreme ultra-violet lithography) is being investigated for next generation lithography. Among the core EUVL technologies, mask fabrication is also of great importance. In this work, we investigated etching properties of the various EUVL mask materials such as Al2O3 (ARC layer), TaN (absorber layer), Ru (capping layer), Mo/Si multi-layer (reflective layer) and nickel (etch-stop layer) in inductively coupled plasmas. Etch rate and etch selectivity of the mask materials were investigated by varying the gas flow, DC self-bias voltage, and top electrode power. Based on the single layer etch results, etching of stacked mask structures were carried for the control of profile angle and selectivity between layers. Etch characteristics of the single layer and stacked structures will be discussed in detail.