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(54) **PLASMA PROCESSING METHOD AND  
PLASMA PROCESSING APPARATUS**

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(57) **ABSTRACT**

A plasma processing method includes (a) placing a substrate onto a substrate support surface of a substrate support in a chamber in a plasma processing apparatus. The plasma processing method further includes (b) etching a film on the substrate with plasma. The plasma processing method further includes (c) cleaning the chamber with plasma. In (b) and (c), a bias voltage including a pulse of a direct current voltage and having a pulse waveform is cyclically applied to a bias electrode in the substrate support. The bias voltage has a bias frequency being an inverse of a duration of a waveform cycle of the pulse waveform. The bias frequency is higher in (c) than in (b).

