

Abstract Submitted
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Investigation of Capacitively Coupled Plasma with electron beam by impedance analysis INSHIK BAE, HONGYOUNG CHANG¹, KAIST — In etching process, one of the key issue is to obtain high self-bias voltage for high ion energy. Therefore dual or triple frequencies Capacitively Coupled Plasma (CCP) has been widely used in etching process. However, if electron beam is added to CCP, the powered plate becomes negatively charged and it brings high self-bias voltage. Therefore we have investigated the dual frequencies CCP with electron beam because of its interesting property. Usually, Langmuir probe is widely used to investigate the plasma but we investigated the CCP with electron beam plasma by impedance analysis instead. The impedance analysis does not affect the plasma and it shows overall circuit characteristics of the plasma. Therefore it has some advantages compared with the Langmuir probe. However, it is not widely used analysis method so we studied the impedance analysis method and compared it with Langmuir probe.

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