Abstract Submitted
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Measurement of the surface charge accumulation using anodic aluminum oxide(AAO) structure in an inductively coupled plasma JI-HWAN PARK, SEUNG-JU OH, HYO-CHANG LEE, YU-SIN KIM, YOUNG-CHEOL KIM, JUNE YOUNG KIM, Hanyang University, CHANG-SEOUNG HA, SEMES, SOON-HO KWON, JUNG-JOONG LEE, Seoul University, CHIN-WOOK CHUNG, Hanyang University — As the critical dimension of the nano-device shrinks, an undesired etch profile occurs during plasma etch process. One of the reasons is the local electric field due to the surface charge accumulation. To demonstrate the surface charge accumulation, an anodic aluminum oxide (AAO) membrane which has high aspect ratio is used. The potential difference between top electrode and bottom electrode in an anodic aluminum oxide contact structure is measured during inductively coupled plasma exposure. The voltage difference is changed with external discharge conditions, such as gas pressure, input power, and gas species and the result is analyzed with the measured plasma parameters.

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