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Dielectric thickness monitoring method by using dual frequency in processing plasmas SUNG-HO JANG, GUN-HO KIM, CHIN-WOOK CHUNG, Electrical Engineering, Hanyang University, Republic of Korea — The wall condition of a chamber lead to change in plasma state, and therefore it can be very important factor in processing plasmas. Real time measurement method of dielectric film thickness on the wall was developed. This method used the impedance difference of the coated dielectric material because the impedance is a function of the frequency of applying voltage. The experiment was conducted at various pressures and rf powers. The experimental result showed that the thickness of aluminum oxide (Al_2O_3) film could be obtained well. And the changes in the thickness of the deposited dielectric film on the wall in processing plasmas were observed in real time.

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