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Ion Induced Secondary Electron Emission of MgO with Patterned Gold Line Charge Neutralization

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Ion induced secondary electron emission coefficients γ of the MgO protecting layers of an AC plasma display panel (AC-PDP) have been measured. In order to reduce the surface charging effect during the measurement of the MgO samples, patterned gold line layer have been deposited on the surface. The ratio of the ion bombarded surface area of the gold line to the MgO surface was about 3%. The γ values of some protecting layers have been compared with the firing voltage V_f of the AC-PDP which was made of the measured protecting layer. Correct relationship between γ and V_f has been observed. Thus, the patterned gold line method has been proven to be effective for the charge neutralization at insulator surfaces.