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Influences of the degradation of MgO and phosphor on the ion-induced secondary electron emission coefficient and basic discharge characteristics in AC-PDP

H. S. Jeong, J. Y. Lim, W. B. Park, J. H. Choi and E. H. Choi
Charged Particle Beam and Plasma Laboratory / PDP Research Center,
Department of Electrophysics, Kwangwoon University, Seoul, Korea 139-701.

The characteristics of degradation of the ion-induced secondary electron emission coefficient and basic discharge have been measured by γ-FIB system and PDP chamber system, respectively. The ion-induced secondary electron emission coefficient() for the degraded MgO protective layer and the phosphor have been investigated by γ-FIB (focused ion beam) system. The energy of Ne+ ions used has been ranged from 60eV to 200eV throughout this experiment. Also, the basic discharge characteristics of the firing, sustain voltages and currents have measured by oscilloscope and PDP Driving system in the PDP chamber. The degraded MgO and phosphors have the higher values in each of their acceleration voltage range. And the values of the degraded phosphors more increased than the degraded MgO protective layer. All of the experimental conditions described the experimental configuration.