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Improvement of secondary electron emission coefficient(γ) of the MgO film by O₂ Plasma-Treatment

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We studied the influence of the O₂ Plasma-treatment on MgO film. Oxygen gas was fed for RF Generator and the process pressure was 80 mTorr. The RF power tested for the treatment ranged from 50W to 150W, and we found that the best RF power and the time for plasma-treatment are 50W and 10 mins, respectively. Secondary electron emission coefficient(γ) has been measured by ν -FIB(Focused Ion Beam) system. The MgO thin film has been deposited from sintered material under electron beam evaporation method. The energy of Ne⁺ ions used has been ranged from 60eV to 200eV.