

## Oxygen and Hydrogen Plasma Effects on the MgB<sub>2</sub> Superconductivity

Cheol Eui Lee<sup>\*</sup>, J. K. Jung

*Department of Physics, Korea University, Seoul 136-713, Korea*

We have studied the oxygen and hydrogen plasma treatment effects on the superconductivity of MgB<sub>2</sub> by means of electric conductivity and magnetic susceptibility measurements. Decrease in the superconducting transition temperature and diamagnetism as well as increase in the critical current density were observed, and our results are discussed in terms of the ionicity of Mg and B and the vortex pinning by defects introduced by the plasma treatments.