

박막형 고온초전도 선재를 위한 산화물 완충층의
IBAD_MgO 기판에서의 성장과 특성

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**Growth and characterization of oxide buffer layer on IBAD_MgO template
for HTS coated conductors**

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Abstract : Buffer layers play an important role in the development of high critical current density coated conductor. LaMnO₃, SrTiO₃ and BaZrO₃ buffer layers were compatible with MgO surfaces and also provide a good template for growing high current density REBCO(RE=Rare earth) films. Systematic studies on the influences of pulsed laser deposition parameters (deposition temperature, deposition pressure, processing gas, laser energy density, etc.) on microstructure and texture properties of LaMnO₃, SrTiO₃ and BaZrO₃ films as buffer layer deposited on ion-beam assisted deposition MgO (IBAD_MgO) template by pulse laser deposition method, were carried out. These results will be presented together with the discussion on the possible use of this material in HTS coated conductor as buffer.

Key Words : Oxide buffer, coated conductor, LaMnO₃, SrTiO₃, BaZrO₃, IBAD_MgO