

Nd₂O₃-ZnO-B₂O₃계 유리 첨가 알루미나 복합체의 유전 특성

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Microwave dielectric properties of Nd₂O₃-ZnO-B₂O₃ glass-added alumina

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Abstract

Influence of Nd₂O₃ addition to ZnO-B₂O₃-based glass on the water leaching resistance of the glass was first investigated. The optimized Nd₂O₃-ZnO-B₂O₃ (NZN) glass was ball milled for varying time, mixing with followed by Al₂O₃ crystalline phase to form Al₂O₃-NZN glass composites at 875 °C for 1h. Microwave dielectric properties of the composites were investigated as a function of the ball milling time of the NZN glass. Dielectric constant and quality factor were 5.70 and 9497 GHz, respectively, when the NZN glass was ball milled for 6h prior to mixing with Al₂O₃.

Key Words : Nd₂O₃, ZnO-B₂O₃, micro dielectric, Dielectric property