

티타늄 합침에 의한  $(\text{Zn}_{1-x}\text{Ni}_x)_2\text{TiO}_4$  스피넬 세라믹스  
Titanium Incorporation in  $(\text{Zn}_{1-x}\text{Ni}_x)_2\text{TiO}_4$  Spinel Ceramics

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Composition in the  $(\text{Zn}_{1-x}\text{Ni}_x)_2\text{TiO}_4 + y\text{TiO}_2$  system ( $x=0\sim 0.5$ ,  $y=0\sim 0.35$ ) were synthesized via the solid-state reaction route. The incorporation of titanium, in the form of  $\text{TiO}_2$ , in  $(\text{Zn}_{1-x}\text{Ni}_x)_2\text{TiO}_4$  spinel ceramics were investigated by analyzing the crystal structure and measuring the dielectric properties. The result of the crystal structure analysis suggested that  $\text{TiO}_2$  level of 0.01 y 0.33 could be incorporated into the  $(\text{Zn}_{1-x}\text{Ni}_x)_2\text{TiO}_4$  spinel. The change of incorporated  $\text{TiO}_2$  level is related with Co-content as a inverse proportion and the variation of lattice parameter and dielectric properties were supported the result.