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**Synthesis and Dielectric Properties of Layered-Perovskite  $\text{KCa}_2\text{Na}_{n-3}\text{Nb}_n\text{O}_{3n+1}$** **Ceramics**

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**Abstract**

$\text{KCa}_2\text{NaNb}_4\text{O}_{13}$  (4KCNNNO)<sup>1</sup> ceramics are well-sintered at 1325°C without any secondary phase. However,  $\text{K}_2\text{O}$  evaporation occurs in  $\text{KCa}_2\text{Na}_2\text{Nb}_5\text{O}_{16}$  (5KCNNNO)<sup>2</sup> ceramics calcined at temperatures higher than 1200°C, resulting in the formation of the  $\text{KCa}_2\text{Na}_3\text{Nb}_6\text{O}_{19}$  (6KCNNNO)<sup>3</sup> secondary phase. Excess- $\text{K}_2\text{O}$  was added to the 5KCNNNO specimen to synthesize pure 5KCNNNO ceramics by compensating for the

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<sup>1</sup>  $\text{KCa}_2\text{NaNb}_4\text{O}_{13}$  defined as 4KCNNNO

<sup>2</sup>  $\text{KCa}_2\text{Na}_2\text{Nb}_5\text{O}_{16}$  defined as 5KCNNNO

<sup>3</sup>  $\text{KCa}_2\text{Na}_3\text{Nb}_6\text{O}_{19}$  defined as 6KCNNNO

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