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High-Q microwave dielectric properties in the $Na_{0.5}Sm_{0.5}TiO_3$ + Cr_2O_3 ceramics by one synthetic process

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Graphical Abstract

The experimental XPS results showed that Cr^{3+} substitution restrained the formation of Ti^{3+} ions in the $Na_{0.5}Sm_{0.5}TiO_3$ + Cr_2O_3 ceramics by one synthetic process

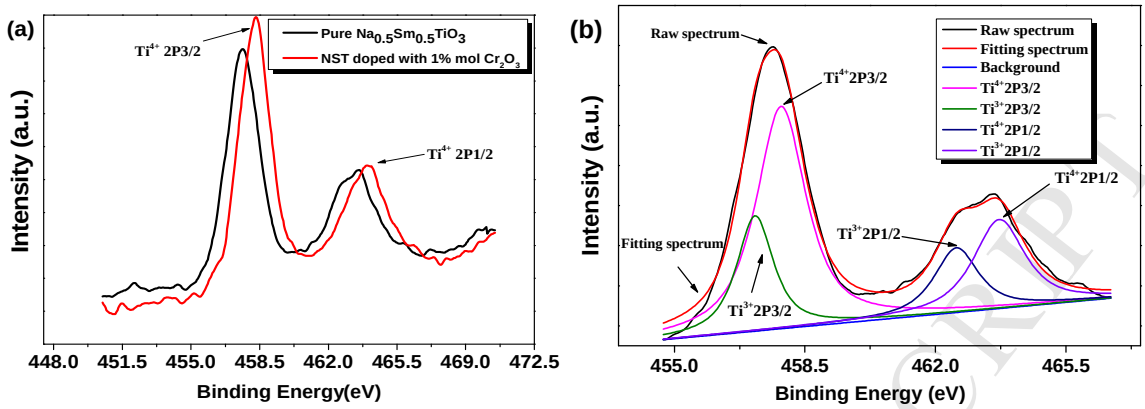

Fig. 6. (a) The experimental spectrum of Ti 2p for pure $Na_{0.5}Sm_{0.5}TiO_3$ and NST ceramics doped with 1% mol Cr_2O_3, and (b) the experimental and deconvoluted Ti 2p XPS spectrum for pure $Na_{0.5}Sm_{0.5}TiO_3$ ceramics sintered at 1450°C for 2 h.