Mechanical strength improvement of (Na-Ba)NO_3/MgO by adding metal compound

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The increasing CO2 concentration in the atmosphere has been shown to be a leading contributor to global climate change. In previous study, NaNO3 and Ba(NO3)2 impregnated into MgO showed the stable adsorption capacity in the cyclic measurement, but owned low mechanical strength. In this study, different metal compound were added into this adsorbent, which were calcinated at 400oC for 2,4,8hr, respectively, and then mechanical strength was measured by crushing test. It has indicated that mechanical strength has been improved and presents the stable trend after adding CaCO3. The obtained sorbents have been characterized with XRD and TGA.