The carbon resistance of $La_2Sn_2O_7$-Ni-GDC anode catalyst in methane condition

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The pyrochlore structure oxide $La_2Sn_2O_7$ is known as its selective oxidative reactivity. We introduced the oxide to anode catalyst for direct hydrocarbon-fueled SOFC. $La_2Sn_2O_7$-Ni-GDC shows resistance to carbon deposition in metahen condition due to catalytic oxidation of hydrocarbon and there is no evidance for performance degradation during operation. $La_2Sn_2O_7$ can be a solution for carbon coking problem in direct hydrocarbon-fueled SOFC.