

## Dry reforming of methane over nickel supported on Nd-Ceria: Enhancement of the catalytic properties and coke resistance

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### Electronic Supplementary Information

**Table S1. CH<sub>4</sub> and CO<sub>2</sub> percentage conversion values as a function of reaction temperature.**

Catalyst	600 °C		650 °C		700 °C		750 °C		800 °C	
	CO <sub>2</sub>	CH <sub>4</sub>	CO <sub>2</sub>	CH <sub>4</sub>	CO <sub>2</sub>	CH <sub>4</sub>	CO <sub>2</sub>	CH <sub>4</sub>	CO <sub>2</sub>	CH <sub>4</sub>
Ni/CeO <sub>2</sub>	30	20	44	33	56	47	68	60	77	70
Ni/Ce <sub>0.95</sub> Nd <sub>0.05</sub> O <sub>2-δ</sub>	37	31	50	45	63	61	76	75	84	85
Ni/Ce <sub>0.9</sub> Nd <sub>0.1</sub> O <sub>2-δ</sub>	36	28	50	44	61	58	74	73	84	83
Ni/Ce <sub>0.8</sub> Nd <sub>0.2</sub> O <sub>2-δ</sub>	36	30	47	44	60	58	71	71	79	80

**Table S2. Initial and final reactant conversions displayed in time on-stream runs at 700 C.**

Catalyst	Initial		After 24 h		Difference (%)	
	CO <sub>2</sub>	CH <sub>4</sub>	CO <sub>2</sub>	CH <sub>4</sub>	CO <sub>2</sub>	CH <sub>4</sub>
Ni/CeO <sub>2</sub>	49	40	34	25	31	38
Ni/Ce <sub>0.95</sub> Nd <sub>0.05</sub> O <sub>2-δ</sub>	66	64	60	57	10	9
Ni/Ce <sub>0.9</sub> Nd <sub>0.1</sub> O <sub>2-δ</sub>	67	64	63	59	7	9
Ni/Ce <sub>0.8</sub> Nd <sub>0.2</sub> O <sub>2-δ</sub>	66	63	62	56	7	10