

Supporting Information

Oscillating Syngas Production on NiO/YSZ Catalyst in Methane Oxidation

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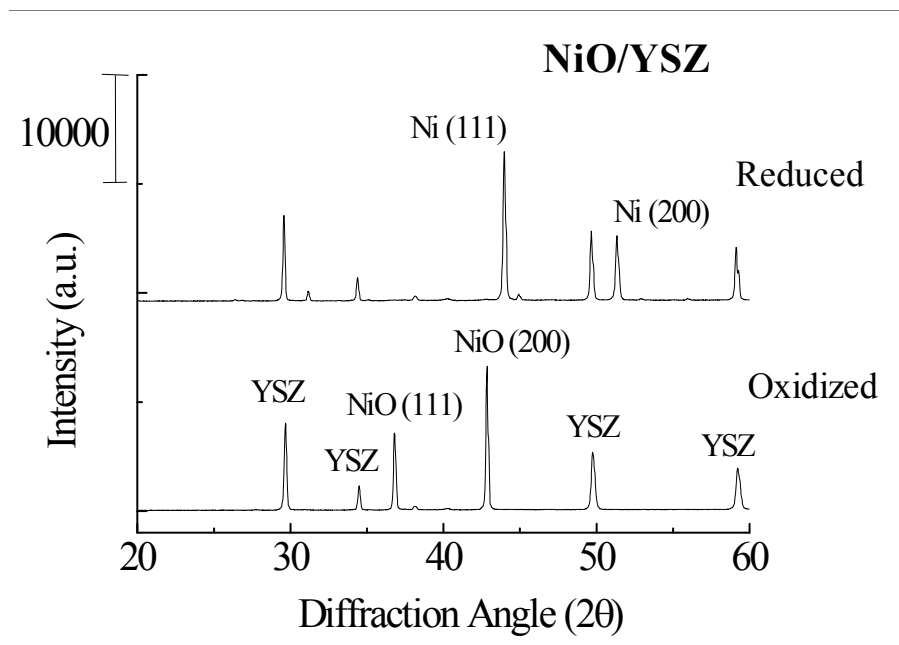


Figure S1. X-ray diffraction pattern on NiO/YSZ catalyst

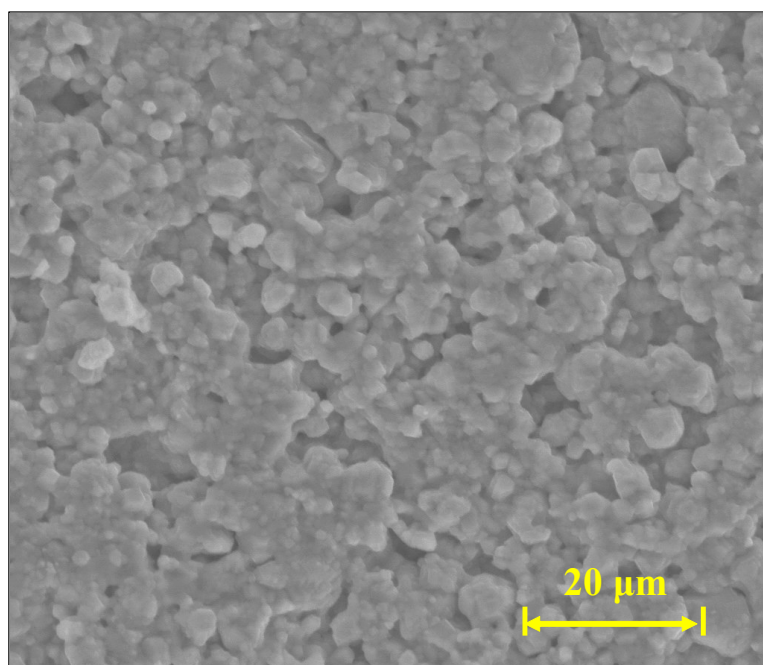


Figure S2. SEM image of as-sintered NiO/YSZ catalyst

NiO/YSZ



0.3mm

Analyte	Result	Error	Proc-Calc	Line
Ni	77.4901 %	0.0660	Quant.-FP	NiKa
Zr	10.3679 %	0.0621	Quant.-FP	ZrKa
Y	4.0350 %	0.0290	Quant.-FP	Y Ka
Fe	0.1069 %	0.0028	Quant.-FP	FeKa

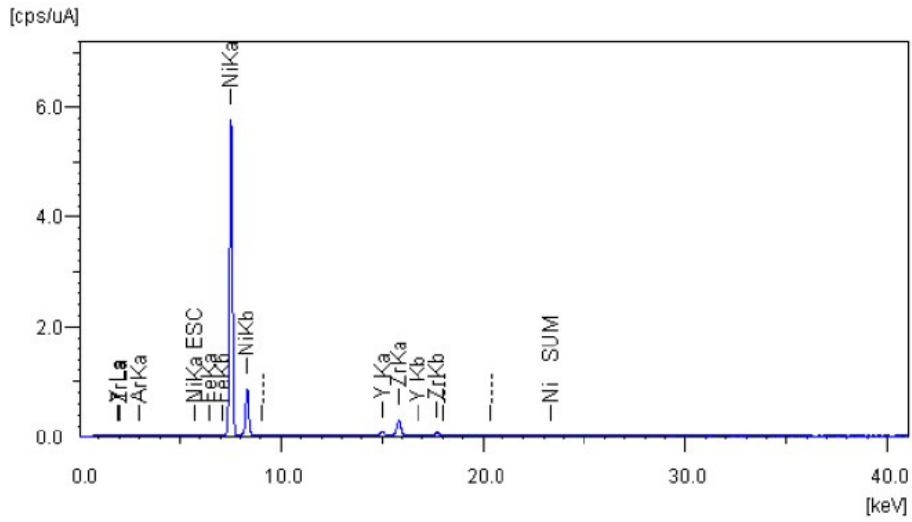


Figure S3. XRF analysis on surface of NiO/YSZ catalyst

Oscillating Syngas Production

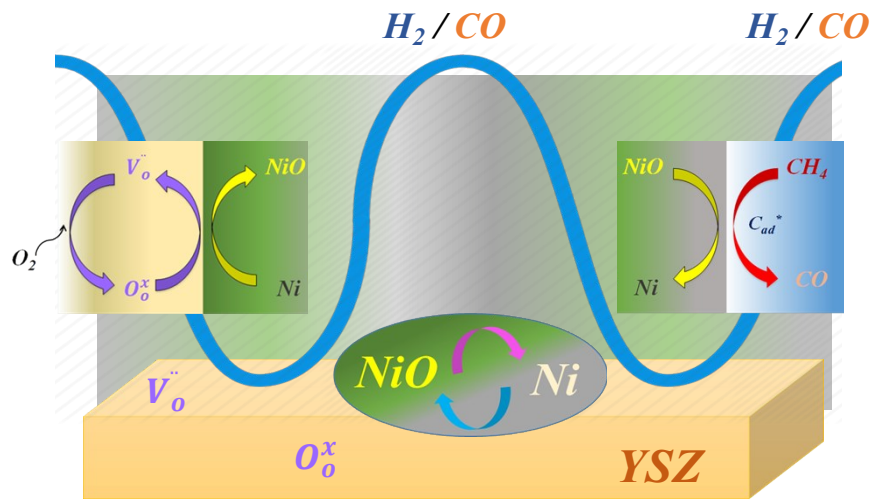


Figure S4. Mechanistic cycle of NiO/YSZ catalyst for methane oxidation