

Article



Supplementary Materials

Investigation of Co–Fe–Al Catalysts for High-Calorific Synthetic Natural Gas Production: Pilot-Scale Synthesis of Catalysts

Tae Young Kim¹, Seong Bin Jo^{2,3}, Jin Hyeok Woo¹, Jong Heon Lee¹, Ragupathy Dhanusuraman⁴, Soo Chool Lee^{3,*} and Jae Chang Kim^{1,*}

² Department of Chemical and Environmental Engineering, University of California–Riverside, Riverside, CA 92521, USA; sjo016@ucr.edu

³ Research Institute of Advanced Energy Technology, Kyungpook National University, Daegu 41566, Korea

⁴ Department of Chemistry, National Institute of Technology Puducherry, Karaikal 609609, India; ragu.nitpy@gmail.com

* Correspondence: soochool@knu.ac.kr (S.C.L.); kjchang@knu.ac.kr (J.C.K.); Tel.: +82-53-950-5622 (S.C.L. & J.C.K.)



Figure S1. Pore size distribution curves over CFAl catalysts.

¹ Department of Chemical Engineering, Kyungpook National University, Daegu 41566, Korea; tyoung0218@knu.ac.kr (T.Y.K.); wjh8865@knu.ac.kr (J.H.W.); rnswma123@knu.ac.kr (J.H.L.)



Figure S2. CO conversion and hydrocarbon selectivity over CFAl catalysts (a-d) as a function of time on stream.



Figure S3. CO conversion and hydrocarbon selectivity of the 40CFAl catalyst prepared at pilot-scale as function of time on steam.



Figure S4. Time on stream of selectivity over the 40CFAl_P catalyst, under two different conditions ((**a**) 6000 mL/g/h, 300 °C; and 10 bar; (**b**) 4000 mL/g/h, 350 °C, and 20 bar).