

Article

Supplementary Materials

Selective CO hydrogenation over bimetallic Co-Fe catalysts for the production of light paraffin hydrocarbons (C₂-C₄): Effect of space velocity, reaction pressure and temperature

Seong Bin Jo^{1,†}, Tae Young Kim^{2,†}, Chul Ho Lee², Jin Hyeok Woo², Ho Jin Chae¹, Suk-Hwan Kang³, Joon Woo Kim⁴, Soo Chool Lee^{1,*} and Jae Chang Kim^{2,*}

¹ Research Institute of Advanced Energy Technology, Kyungpook National University, Daegu 41566, Republic of Korea; santebin@knu.ac.kr (S.B.J.); hwman777@nate.com (H.J.C.)

² Department of Chemical Engineering, Kyungpook National University, Daegu 41566, Republic of Korea; tyoung0218@knu.ac.kr (T.Y.K.); cjfgh38@knu.ac.kr (C.H.L.); wjh8865@knu.ac.kr (J.H.W.)

³ Institute for Advanced Engineering, Yongin 41718, Republic of Korea; shkang@iae.re.kr (S-H.K.)

⁴ Research Institute of Industrial Science and Technology, Pohang 37673, Republic of Korea; realjoon@rist.re.kr (J.W.K.)

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

† Seong Bin Jo and Tae young Kim contributed equally to this work.

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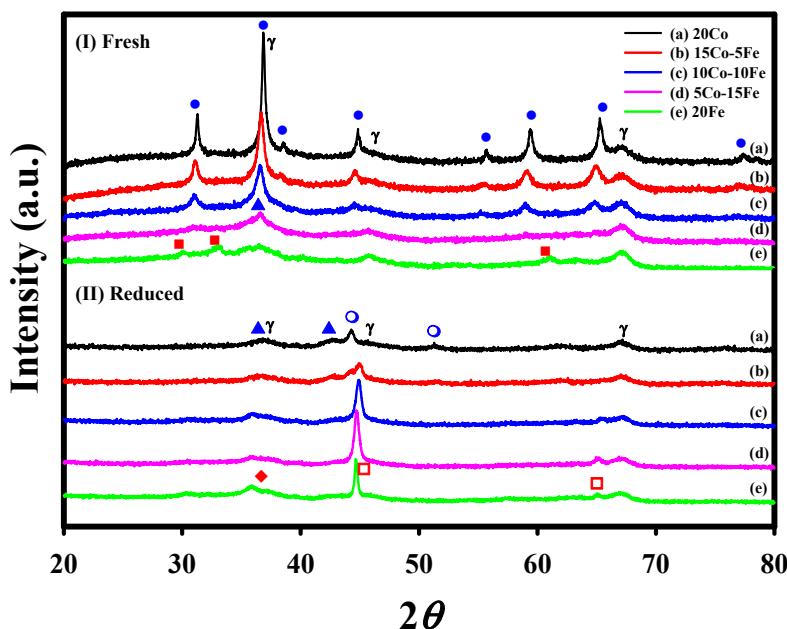


Figure S1. XRD patterns of the monometallic and bimetallic Co-Fe catalysts in fresh and reduced states; (●) Co_3O_4 , (▲) CoO , (△) Co metal, (◆) Fe_2O_3 , (■) Fe_3O_4 , and (□) Fe metal.

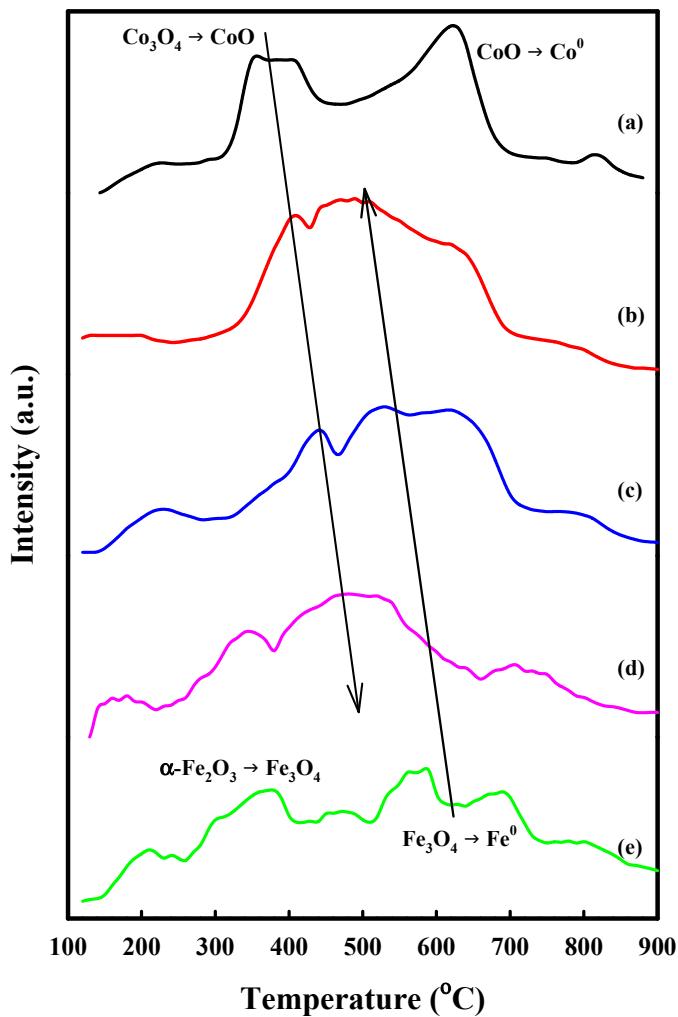


Figure S2. H₂-TPR profiles of the monometallic and bimetallic catalysts supported on γ -alumina: (a) 20Co/ γ -Al₂O₃, (b) 15Co-5Fe/ γ -Al₂O₃, (c) 10Co-10Fe/ γ -Al₂O₃, (d) 5Co-15Fe/ γ -Al₂O₃, and (e) 20Fe/ γ -Al₂O₃ (5 °C/min, pure hydrogen).

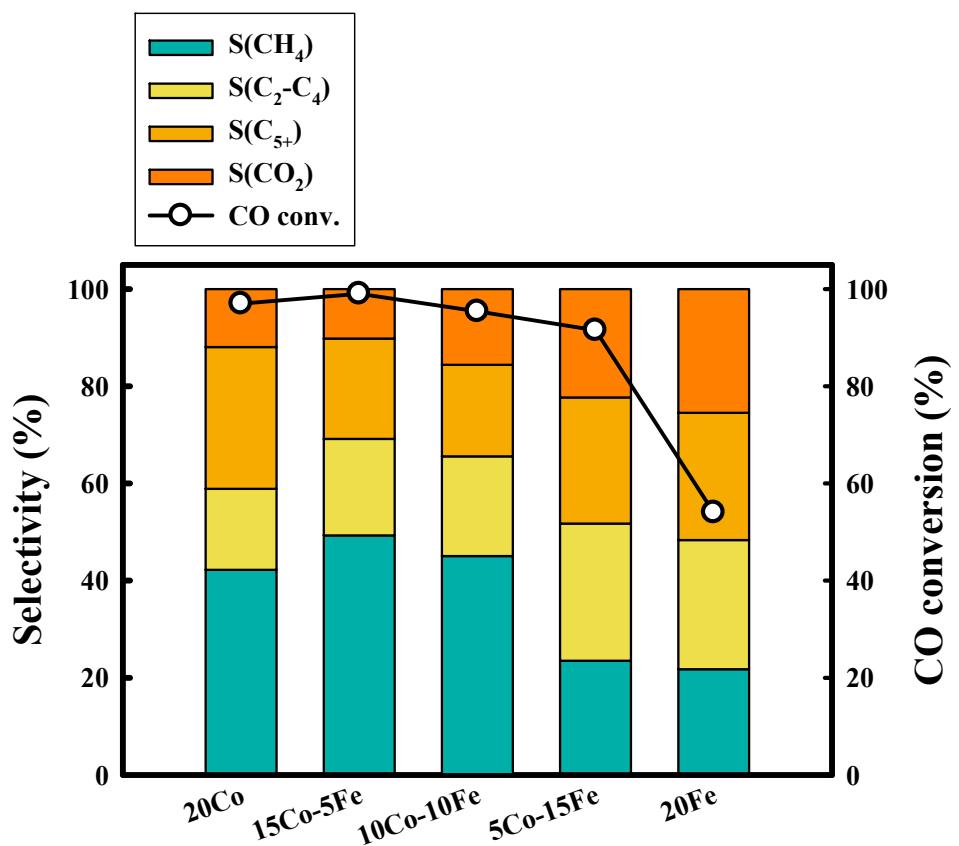


Figure S3. CO conversion and hydrocarbon distribution of the monometallic and bimetallic catalysts supported on γ -alumina: 20Co/ γ -Al₂O₃, 15Co-5Fe/ γ -Al₂O₃, 10Co-10Fe/ γ -Al₂O₃, 5Co-15Fe/ γ -Al₂O₃, and 20Fe/ γ -Al₂O₃ at H₂/CO ratio=3.0, 300 °C, and 10 bar.