Supporting Information for

Design of nanocomposites with cobalt encapsulated in the zeolite micropores for selective synthesis of isoparaffins in Fischer-Tropsch reaction

Alexandre Carvalho,^[a] Maya Marinova,^[b] Nuno Batalha,^[a] Nilson R. Marcilio^[b], Andrei Y. Khodakov^{[a]*} and Vitaly V. Ordomsky^{[a,c]*}

^a Univ. Lille, CNRS, Centrale Lille, ENSCL, Univ. Artois, UMR 8181 - UCCS - Unité de Catalyse et Chimie du Solide, F-59000 Lille, France

^b Department of Chemical Engineering, Federal University of Rio Grande do Sul, Porto Alegre, RS, 90040-040, Brazil

^c Institut Chevreul, FR2638 CNRS, Bât. C6 Université Lille 1, F-59655 Villeneuve d'Ascq, France

^d Eco-Efficient Products and Processes Laboratory (E2P2L), UMI 3464 CNRS-Solvay, Shanghai, P.R. China

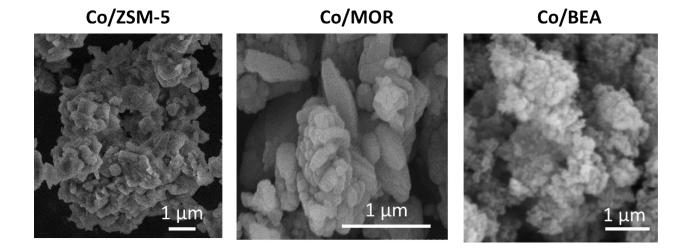


Figure S1. SEM images of zeolites

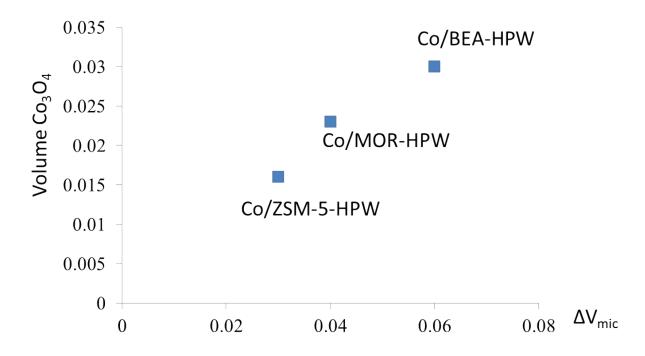
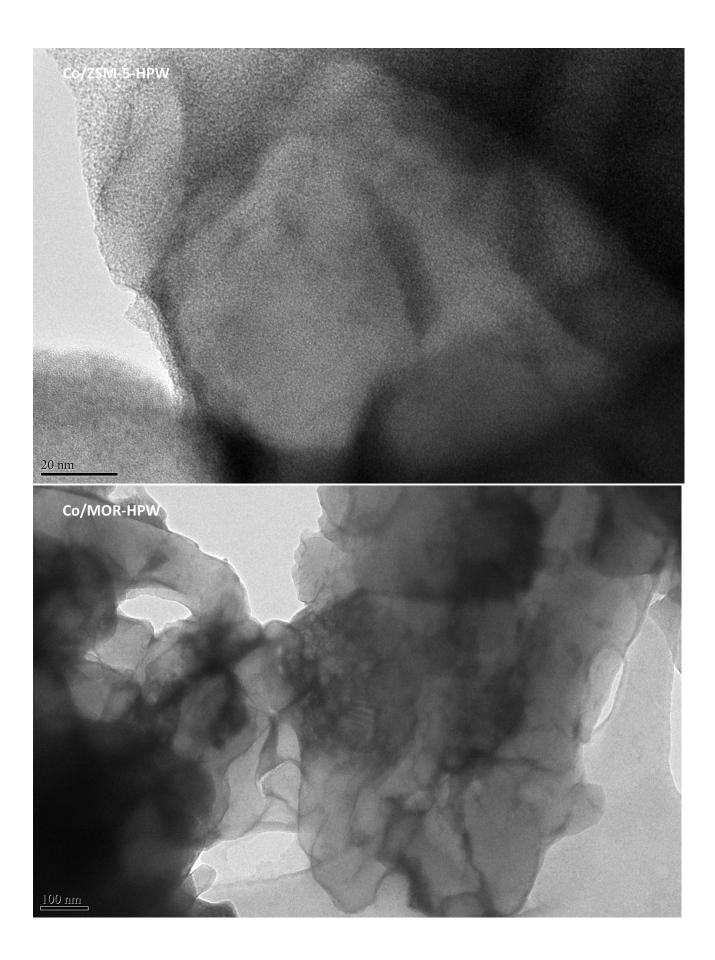


Figure S2. Correlation between decrease of the microporous volume of Co/Zeolite-HPW in comparison with parent zeolite and theoretical volume of the introduced Co



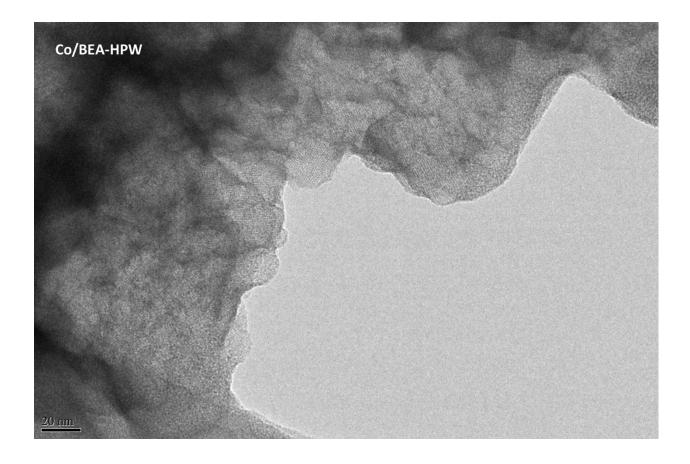


Figure S3. TEM image of the catalysts after HPW treatment

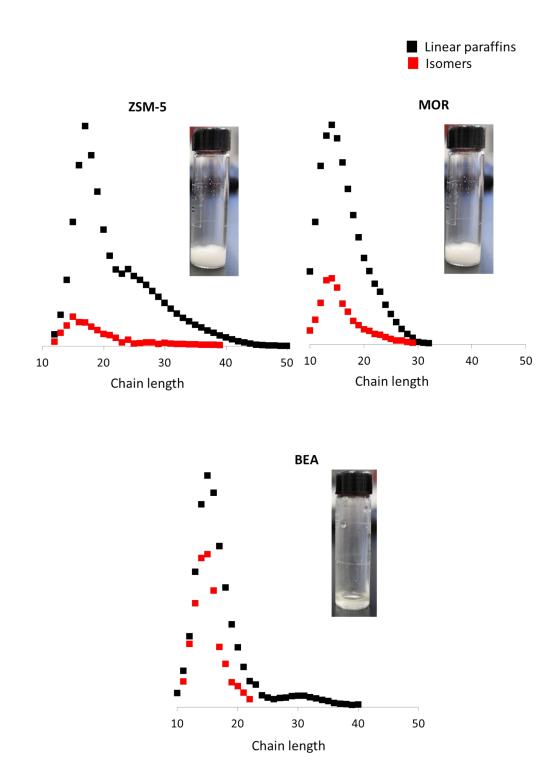


Figure S4. Hydrocarbon distribution in liquid products

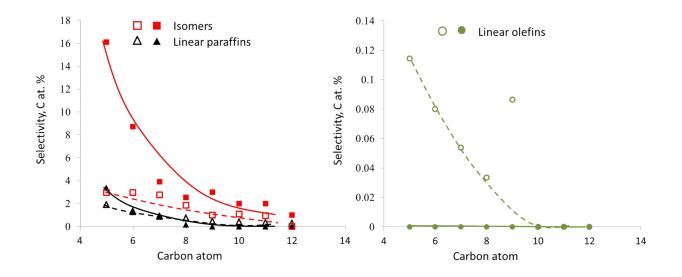


Figure S5. Distribution of isomers, linear paraffins and linear olefins depending on the chain length for Co/ZSM-5 (open symbols) and Co/ZSM-5-HPW (filled symbols).

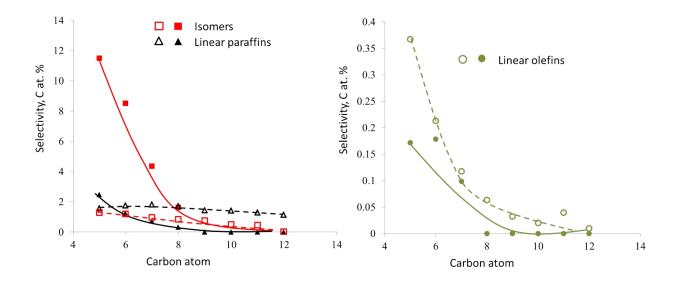


Figure S6. Distribution of isomers, linear paraffins and linear olefins depending on the chain length for Co/MOR (open symbols) and Co/MOR-HPW (filled symbols).

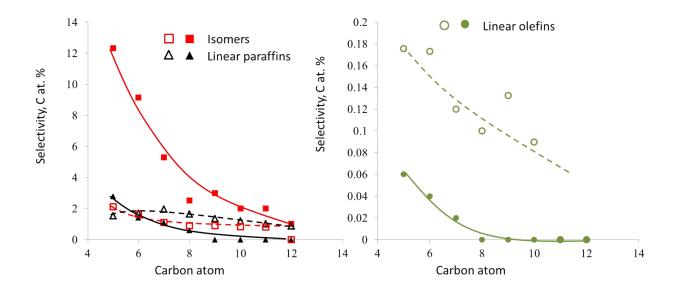


Figure S7. Distribution of isomers, linear paraffins and linear olefins depending on the chain length for Co/BEA (open symbols) and Co/BEA-HPW (filled symbols).

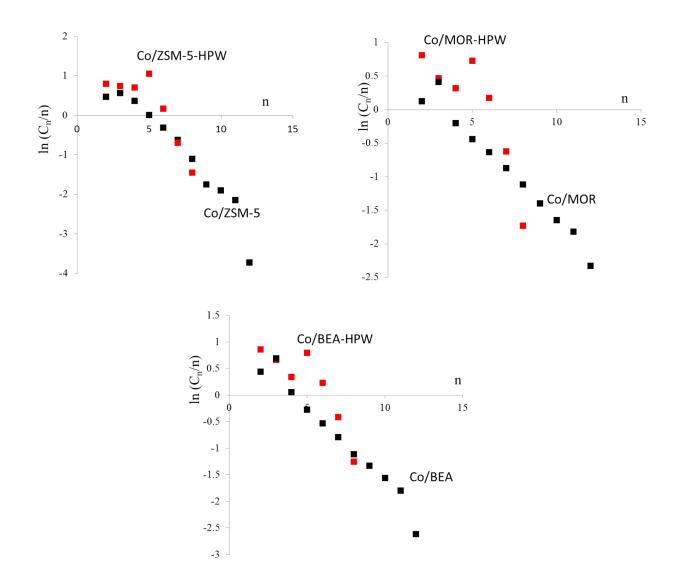


Figure S8. Anderson-Schulz-Flory SF distribution of hydrocarbons produced in Fischer-Tropsch synthesis over Co/Zeolite nanocomposites before and after HPW treatment