

Electronic Supporting Information

Methanol to olefins: Activity, stability of nanosized SAPO-34 molecular sieve and control of selectivity by silicon distribution

Zhibin Li ¹, Joaquin Martínez-Triguero¹, Patricia Concepción¹, Jihong Yu², Avelino Corma^{1*}

¹*Instituto de Tecnología Química (UPV-CSIC), Universidad Politécnica de Valencia, Consejo Superior de Investigaciones Científicas, Av. de los Naranjos s/n, 46022 Valencia, Spain*

²*State Key Laboratory of Inorganic Synthesis and Preparative Chemistry, College of Chemistry, Jilin University, Changchun, 130021.China.*

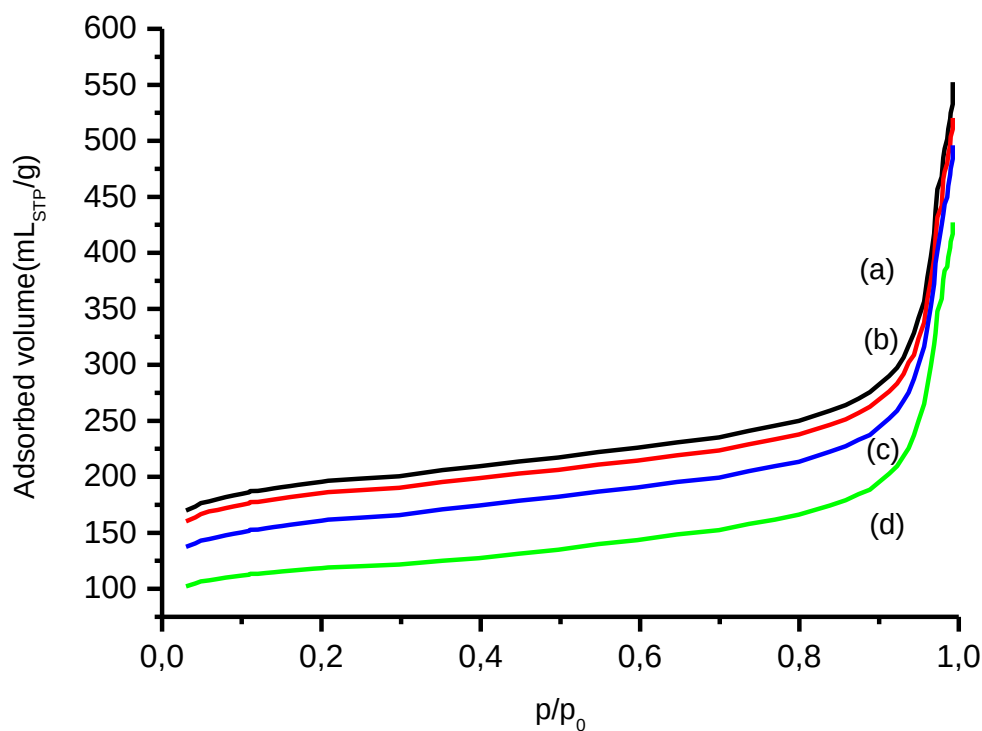


Fig.S1. Nitrogen desorption isotherms of nano-SAPO-34 after a)7, b)28, c)42 and d)107 days of exposition to moisture.

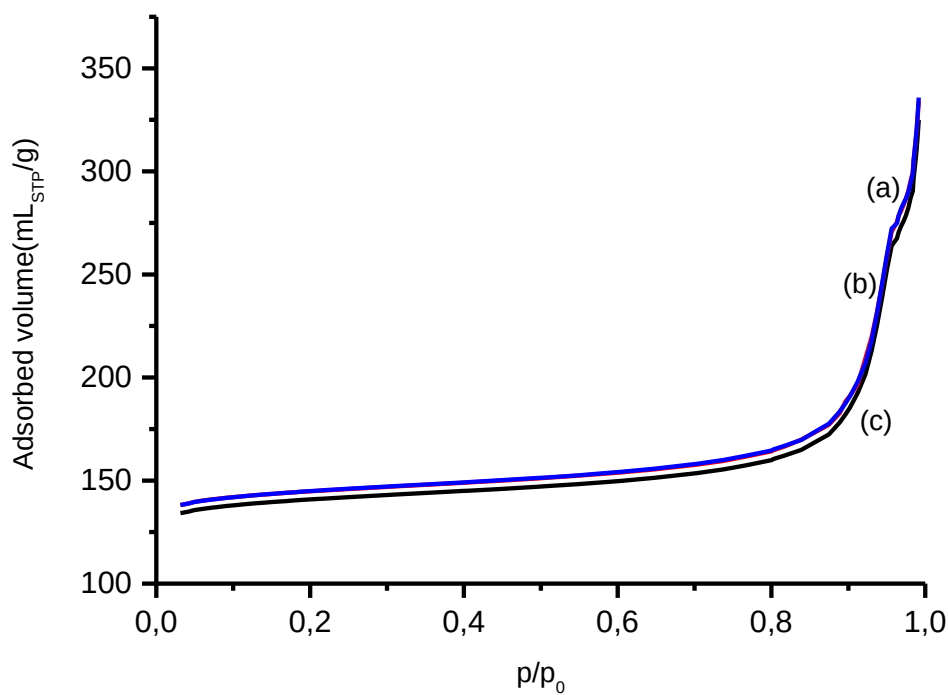


Fig.S2. Nitrogen desorption isotherms of standard-SAPO-34 after a)5, b)29 and c)44 days of exposition to moisture.

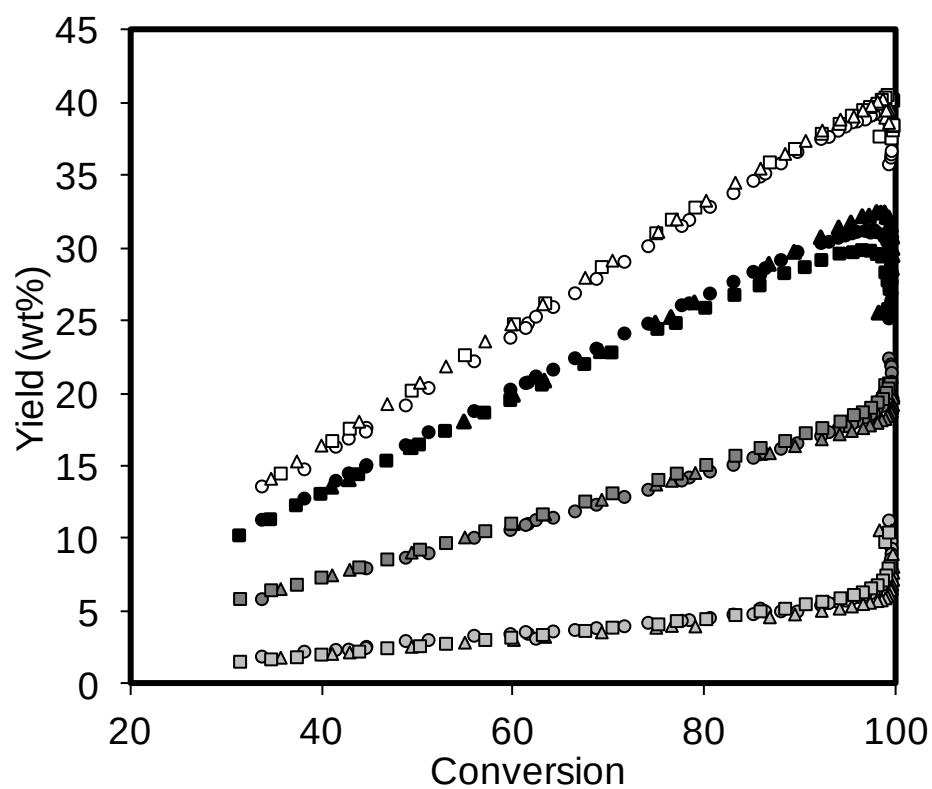


Fig.S3. Yields to C2, C3, C4 and C5+ hydrocarbons in the conversion of Methanol on nano-Sapo-34 (21 days exposed to moisture) at different WHSV (7, 11, 15 h⁻¹) at 400°C.

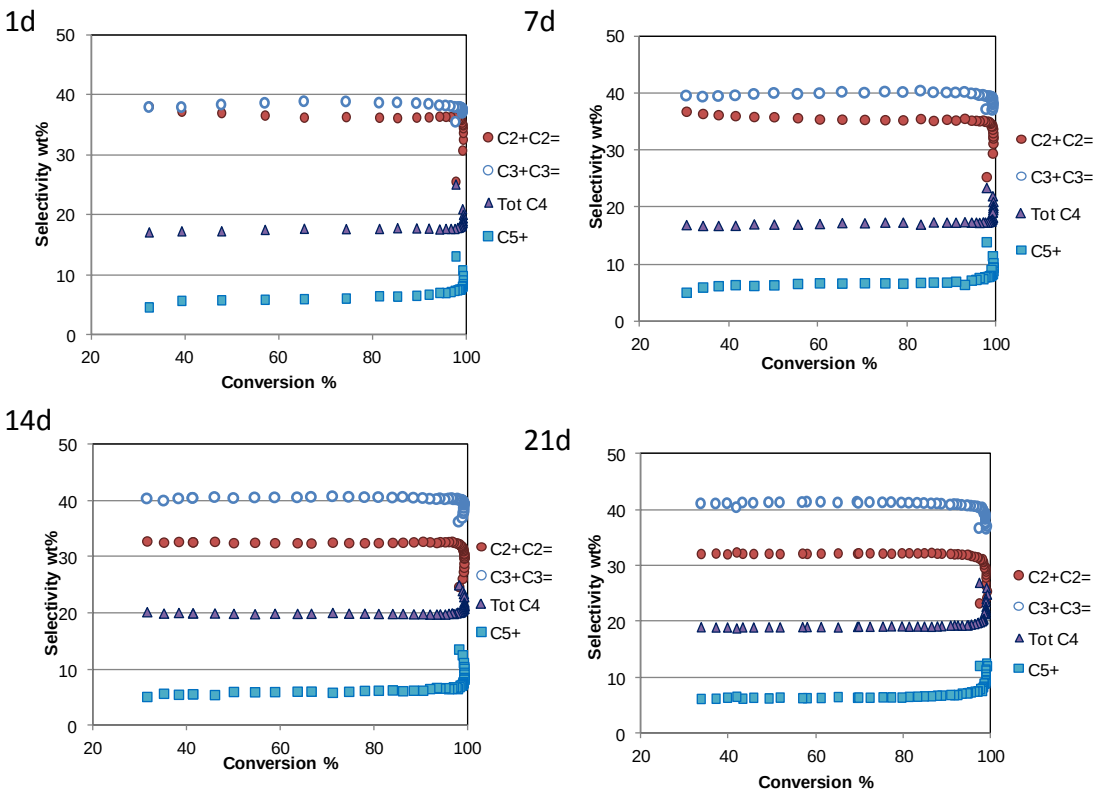


Fig.S4. Selectivities to C2, C3, C4 and C5+ hydrocarbons in the conversion of Methanol on nano-Sapo-34 after exposure to moisture for 1, 7, 14 and 21 days.

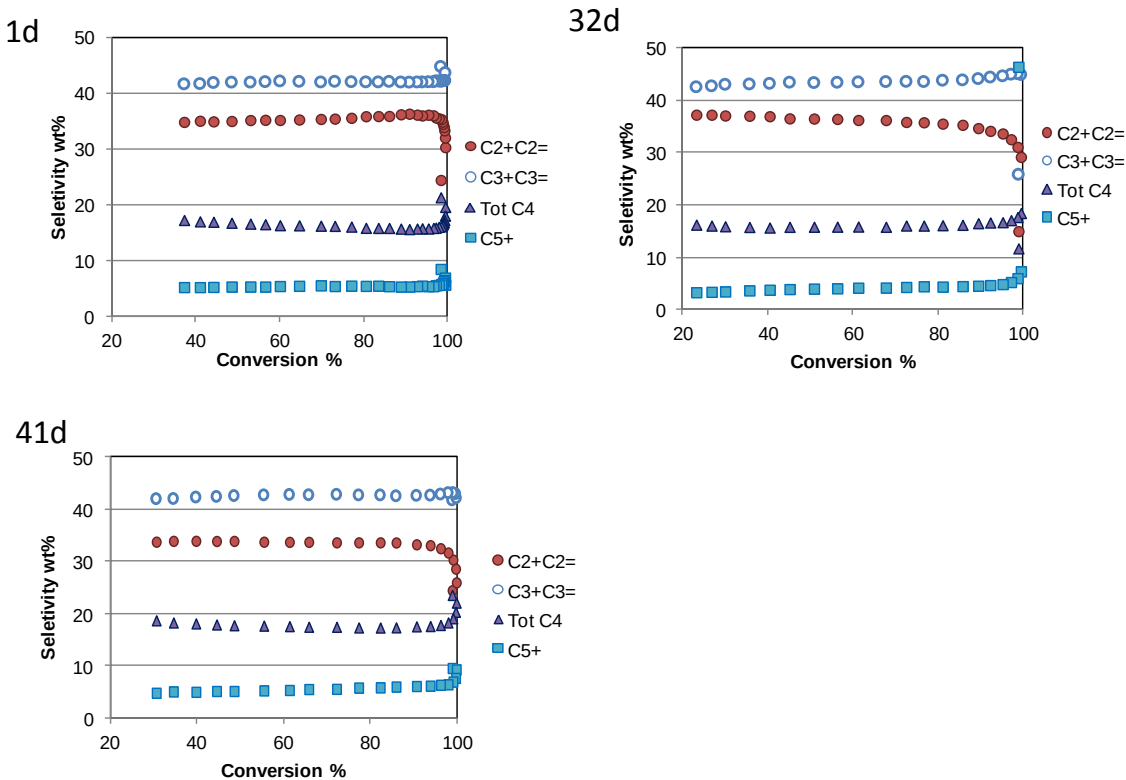


Fig.S5. Selectivities to C2, C3, C4 and C5+ hydrocarbons in the conversion of Methanol on standard-SAPO-34 after exposure to moisture for 1, 31 and 44 days.