SUPPLEMENTARY MATERIAL

**Kinetic study of propane aromatization over Zn/HZSM-5 zeolite under conditions of catalyst deactivation using genetic algorithm**

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Table S-І**.** Propane conversion, aromatics selectivity and yield on the ion exchanged and impregnated Zn/HZSM-5 catalysts for propane aromatization. (reaction conditions: *T*=*560*°C, space velocity=*500* cc gcat-1h-1, TOS=*0.5*h, *P*=*1*atm, feed composition=50 mol% propane)

|  |  |  |  |
| --- | --- | --- | --- |
| catalyst | Propane conversion,% | Aromatics selectivity, % | Aromatics yield, % |
| Ion Ion exchanged Zn/HZSM-5 with 0.01 M solution of zinc nitrate | 55.1 | 59.7 | 32.9 |
| Ion exchanged Zn/HZSM-5 with 0.02 M solution of zinc nitrate | 63.2 | 63.6 | 40.2 |
| Impregnated Zn/HZSM-5  | 64.8 | 67.0 | 43.4 |







Fig. S-1**.**  Effect of contact time on propane conversion at different temperatures and (a) TOS=*0.5*h, (b) TOS=*11*h, (c) TOS=*21*h.

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