

## MSE-Type Zeolites: A Promising Catalyst for the Conversion of Ethene to Propene

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The direct conversion of ethene to propene (ETP) is a potentially important route for the selective production of the latter olefin. Here we report that after some time on stream, H-UZM-35, an MSE-type large-pore zeolite, shows much better propene yield than H-SSZ-13, the best catalyst for the ETP reaction thus far. The key to this improvement is the presence of large cylindrical cages in H-UZM-35 that allows the easy formation of isopropyl-naphthalene-based reaction centers for ETP catalysis, while being relatively resistant to coke formation. In addition, mild dealumination with nitric acid was found to further mitigate catalyst deactivation.