CLAIMS:

1. A process for producing a xylene isomer comprising reacting oxygenates with an aromatic feedstock comprising toluene and/or benzene in a methylation zone operating under alkylation conditions comprising a temperature of 260°C to 320°C and a pressure of 10 kPa to 10000 kPa in the presence of a catalyst composition comprising a zeolite selected from a member of the group consisting of UZM-37, MCM-49, UZM-56 to provide a product stream comprising the xylene isomer, wherein a ratio of para-xylene to xylene in the product stream is greater than an equilibrium ratio of para-xylene to xylene.

2. The process of claim 1, wherein the oxygenate is selected from the group consisting of a methanol, a dimethylether, a dimethylcarbonate, and a dimethylsulfate.

3. The process of claim 1, wherein the catalyst comprises a UZM-37 zeolite and the product stream comprises para-xylenes.

4. The process of claim 1, wherein the alkylation is performed in one of a vapor phase, a liquid phase and or a mixed vapor-liquid phase.

5. The process of claim 1, wherein the alkylation conditions comprise a pressure of 300 kPa to 3000 kPa.

6. The process of claim 1, wherein the alkylation conditions comprise a weight hourly space velocity of from 0.5 to 10 hr^{-1}.