Claims

1. A method for preparing propylene from methanol and/or dimethyl ether, comprising

bringing methanol and/or dimethyl ether into contact with a methanol to propylene catalyst to obtain propylene;

the methanol to propylene catalyst comprises a catalyst, wherein the catalyst comprises a molecular sieve with at least one-dimensional 8-membered ring channel in the molecular sieve structure, and the diameter of a sphere that can diffuse along the direction of the 8-membered ring channel is no less than 2.0 Å, the diameter of the sphere that can be included in the molecular sieve structure is no more than 6Å.

2. The method of claim 1, wherein the molecular sieve is at least one selected from aluminosilicate molecular sieve, silicoaluminophosphate molecular sieve and transition metal-substituted aluminophosphate molecular sieve.

3. The method of claim 2, wherein a reaction temperature for bringing methanol and/or dimethyl ether into contact with the methanol to propylene catalyst is in a range of 300 ºC to 500 ºC.

4. The method of claim 2, wherein a conversion rate of raw material is greater than 75% in the method.

5. The method of claim 2, wherein a single pass selectivity to propylene is greater than 60% in the method.

6. The method of claim 1, wherein the molecular sieve structure contains two-dimensional or three-dimensional 8-membered ring channels.

7. The method of claim 1, wherein the diameter of the sphere that can be included in the molecular sieve structure is in a range of 4.8Å to 6Å.

8. The method of claim 1, wherein a topology of the molecular sieve structure is at least one selected from AFN, DFT, PHI, SIV, THO, APD, CAS, EDI, GIS and VNI.