CLAIMS

~~1. A meta-xylene selective binderless zeolitic adsorbent comprising:~~

~~a first FAU type zeolite having a silica to alumina molar ratio of from 3.0 to 6.0;~~

~~wherein the first FAU type zeolite binder is a zeolite Y, and wherein the first FAU type zeolite is 80-90 wt% of the binderless zeolitic adsorbent;~~

~~a binder-converted FAU type zeolite having a silica to alumina molar ratio of from 2.0 to 6.0, wherein the binder-converted FAU type zeolite is 10-20 wt% of the binderless zeolitic adsorbent; and~~

~~cationic exchangeable sites within the binderless zeolitic adsorbent.~~

~~2. The binderless zeolitic adsorbent of claim 1, wherein at least 95 wt% of the binderless zeolitic adsorbent is FAU type zeolite.~~

~~3. The binderless zeolitic adsorbent of claim 1, wherein at least 98 wt% of the binderless zeolitic adsorbent is FAU type zeolite.~~

~~4. The binderless zeolitic adsorbent of claim 1, wherein the cationic exchangeable sites may be alkali/alkaline earth cations.~~

~~5.~~1. A method for producing a meta-xylene selective binderless zeolitic adsorbent ~~of any one of claims 1 to 4,~~ comprising:

forming agglomerates having ion-exchangeable sites, the agglomerates formed from a first FAU type zeolite having a silica to alumina molar ratio of from ~~3.0~~4.0 to 6.0, a non-zeolitic binder comprising silica, alumina, or a combination of silica and alumina, and a forming aid, wherein agglomerates are formed from ~~80 -90 wt%~~ greater than 50% of the first FAU type zeolite ~~and 10 to 20 wt% of the non-zeolitic binder~~;

applying a thermal treatment to the agglomerates at 625ºC or higher to precondition the binder and dissipate the forming aid;

applying a hydrothermal treatment to a mixture obtained by mixing the thermal treated agglomerates with a solution containing at least one source of hydroxide to convert the non-zeolitic ~~material~~binder into a binder-converted FAU type zeolite to form the binderless zeolitic adsorbent comprising the first FAU type zeolite and the binder-converted FAU type zeolite ~~material~~; and

drying the binderless zeolitic adsorbent, wherein the solution is prepared by targeting the following gel molar oxide ratio in the material after the hydrothermal treatment of the mixture:

Al_2O_3 : (3.66 to 10.45) SiO_2 : (3.0 to 4.5) Na_2O : 500 H_2O
not including the first FAU type zeolite.

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~~6. The method of claim 5, wherein at least 95 wt% of the binderless zeolitic adsorbent is FAU type zeolite.~~

~~7. The method of claim 5, wherein at least 98 wt% of the binderless zeolitic adsorbent is FAU type zeolite.~~

~~8. The method of claim 5, wherein the solution containing hydroxide further comprises silicon, aluminium, or a mixture of both silicon and aluminium.~~

~~9. The method of claim 5, further comprising exchanging the ion-exchangeable sites.~~

2. The method of Claim 1, wherein the solution is prepared by targeting the following gel molar oxide ratio in the material after the hydrothermal treatment of the mixture:
Al_2O_3 : 10.45 SiO_2 : 4.5 Na_2O : 500 H_2O
not including the first FAU type zeolite.

3. The method of Claim 1 or 2, wherein the first FAU type zeolite is Y-54.