CLAIMS:

1. A process of preparing a modified EMM-23 material of Formula II:

$$X_2O_3:(m)YO_2 \text{ (Formula II)},$$

comprising combining a composition of Formula (III):

$$X_2O_3:(t)YO_2 \text{ (Formula III)},$$

with an agent comprising X to generate a material of Formula II, wherein the agent is selected from the group consisting of $Al(NO_3)_3$, $Al_2(SO_4)_3$, $AlCl_3$, $Fe(NO_3)_3$, and mixtures thereof ;

wherein m is less than 150, t is greater than or equal to 150, X is a trivalent element, and Y is a tetravalent element.

2. The process of claim 1 further comprises adjusting the pH of the combination of the composition of Formula III and the agent comprising X to within the range of 2.4 to 2.6.

3. The process of claim 1 further comprises adjusting the pH of the combination of the composition of Formula III and the agent comprising X by adding an additional amount of the agent comprising X, such that the pH of the combination having the additional amount of the agent comprising X is within the range of 2.4 to 2.6.

4. The process of claim 3, wherein the process of combining additional amount of the agent comprising X and adjusting the pH of the combination to within the range of 2.4 to 2.6 is repeated until the pH does not change when additional amount of the agent comprising X is added.

5. The process of claim 3, wherein the adjusting of the pH comprises adding a base or an acid to the combination of the composition of Formula III and the agent comprising X.

6. The process of claim 5, wherein the adjusting of the pH comprises adding a base.

7. The process of claim 6, wherein the base comprises an organic amine base.

8. The process of claim 6, wherein the base comprises ammonium hydroxide.

9. The process of claim 3 further comprises heating the pH adjusted combination of the composition of Formula III and the agent comprising X at a temperature from 50 °C to 200 °C.

10. The process of claim 9, wherein the heating comprises heating the combination of the composition of Formula III and the agent comprising X for 1 to 48 hours.

11. A modified EMM-23 material of Formula II:

$$X_2O_3:(m)YO_2 \text{ (Formula II)},$$

wherein m is from 80 to 130, X is a trivalent element, and Y is a tetravalent element; and

wherein the material is substantially free of an impurity.

12. The material of claim 11, wherein the impurity is selected from zeolite beta, ZSM-5, or a mixture thereof.

13. The material of claim 11, wherein the material has an alpha value of greater than 10.

14. The material of claim 11, wherein the material has an alpha value of 15 to 50.

15. The material of claim 11 having a micropore volume greater than 0.15 cc/g.

16. The material of claim 11 having a micropore volume of 0.15 to 0.30 cc/g.

17. The material of claim 11 having a cell a-parameter of 19.6 ± 0.5 Å and c-parameter of 13.5 ± 0.5 Å.

18. The material of claim 11, wherein X comprises B, Al, Fe, Ga, or a mixture thereof.

19. The material of claim 11, wherein Y comprises Si, Ge, Sn Ti, Zr, or a mixture thereof.

20. The modified EMM-23 material of claim 11, after calcination, having at least four XRD peaks selected from Table 4A:

Table 4A

degree 2-theta (±0.20)	d-spacing (Å)	Relative intensity [100 x I/(Io)] (±30%)
5.23	16.87	100
8.40	10.51	32
9.06	9.76	68
15.98	5.54	15
23.81	3.73	50
24.07	3.69	15.