21.16	4.20	M	4.22	m
21.47	4.14	W	4.15	m
21.89	4.06	W	4.1	w - m
22.65	3.92	Vs	3.94	vs
22.79	3.90	M	3.88	s - vs
23.19	3.83	S		
23.89	3.72	M	3.74	m
24.00	3.71	M		
24.26	3.67	W		
25.25	3.52	M		
25.83	3.45	W	3.45	w
26.65	3.34	W	3.35	w
28.86	3.09	W	3.11	w
43.72	2.07	W	2.07	w

Comparative Example 2: Synthesis of NU-86 Based on Example 8 of U.S. Patent No. 5,108,579

[0072] A gel of stoichiometry: 15 octamethonium dibromide : 12 Na_2O : 1.846 Al_2O_3 : 60 SiO_2 : 3000 H_2O was prepared from fumed silica solution (CAB-O-SPERSE), sodium aluminate solution, sodium hydroxide and octamethonium dibromide. The mixture was placed in a 300 ml stirred autoclave (300 rpm) for 23 days at 165°C. The product was recovered by filtration, washed with deionized water, and dried in an air oven. Phase analysis by powder X-ray diffraction showed the product to be pure NU-86. A portion of the NU-86 was calcined in air at 600°C to remove the template. Phase analysis by powder X-ray diffraction showed the calcined sample to be fully crystalline. A comparison of the diffraction patterns of calcined NU-86 and calcined EMM-17 (converted to variable slit intensities) is shown in **Figure 3**.

~~[0073] It will be appreciated that various presently unforeseen or unanticipated alternatives, modifications, variations or improvements therein may be subsequently made by those skilled in the art, and are also intended to be encompassed by the following claims.~~

~~[0074]~~[0073] The disclosures of the foregoing publications are hereby incorporated by reference in their entirety. The appropriate components and aspects of the foregoing publications may also be selected for the present materials and methods in embodiments thereof.

CLAIMS:

1. A molecular sieve material having, in its as-calcined form, an X-ray diffraction pattern including the following peaks in Table 9:

Table 9

d-spacing (Å)	Relative Intensity [100 x I/I(o)]%
17.4-16.4	1-10
12.6-12.1	1-20
11.8-11.4	60-100
11.2-10.8	5-30
10.7-10.3	30-80
8.62-8.38	10-40
6.09-5.96	1-20
5.71-5.61	1-20
4.23-4.17	1-20
4.09-4.03	1-10
3.952-3.901	10-40
3.857-3.809	5-30
3.751-3.705	1-20
3.727-3.682	1-20
3.689-3.644	1-10
3.547-3.506	1-20

~~2. The molecular sieve material of claim 1~~ and ~~having~~ a composition comprising the molar relationship

$$(n)YO_2:X_2O_3,$$

wherein n is at least 30, X is a trivalent element, and Y is a tetravalent element.

~~3.~~2. The molecular sieve material of claim ~~2~~ 1, wherein X includes one or more of B, Al, Fe, and Ga and Y includes one or more of Si, Ge, Sn, Ti, and Zr.

~~4.~~3. The molecular sieve material of claim ~~2~~ 1, wherein X is aluminum and Y is silicon.

~~5.~~4. A molecular sieve material having, in its as-synthesized form, an X-ray diffraction pattern including the following peaks in Table 10:

Table 10

d-spacing (Å)	Relative Intensity [100 x I/I(o)]%
17.3-16.4	1-10
11.8-11.3	60-100
11.1-10.7	60-100
10.7-10.3	30-100
8.58-8.34	30-80
4.21-4.15	10-40
4.17-4.11	5-30
4.07-4.01	10-40
3.951-3.899	60-100
3.922-3.871	10-40
3.832-3.784	50-90
3.737-3.691	10-40
3.704-3.659	10-40
3.677-3.632	5-30
3.537-3.496	10-40
2.077-2.063	5-30

~~6. The molecular sieve material of claim 5 having~~ and a composition comprising the molar relationship:

$$kF:mQ:(n)YO_2: X_2O_3,$$

wherein $0 \leq k \leq 1.0$, $0 < m \leq 1.0$, n is at least 30, F is a source of fluoride, Q is an organic structure directing agent selected from the group consisting of 1-methyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-ethyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-propyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-butyl-4-(pyrrolidin-1-yl)pyridinium cations and mixtures thereof, X is a trivalent element and Y is a tetravalent element.

~~7.~~5. The molecular sieve material of claim ~~6~~ 4, wherein X is aluminum and Y is silicon.

~~8.~~6. The molecular sieve material of claim ~~6~~ 4, wherein X includes one or more of B,

Al, Fe, and Ga and Y includes one or more of Si, Ge, Sn, Ti, and Zr.

~~9. The molecular sieve material of claim 6, wherein Q is selected from the group consisting of 1-methyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-ethyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-propyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-butyl-4-(pyrrolidin-1-yl)pyridinium cations and mixtures thereof.~~

~~10.~~7. A process for producing the molecular sieve material of claim ~~6~~ 4, the process comprising:

(i) preparing a synthesis mixture capable of forming said material, said mixture comprising water, a source of hydroxyl ions, a source of an oxide of a tetravalent element Y, optionally a source of a trivalent element X, optionally a source of fluoride ions, and a directing agent Q selected from the group consisting of 1-methyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-ethyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-propyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-butyl-4-(pyrrolidin-1-yl)pyridinium cations and mixtures thereof, and said synthesis mixture having a composition, in terms of mole ratios, in the following amounts and/or ranges:

YO_2/X_2O_3	at least 30;
H_2O/YO_2	4 to 10;
OH^-/YO_2	0.1 to 1;
F/YO_2	0 to 1; and
Q/YO_2	0.1 to 1;

(ii) heating said synthesis mixture under crystallization conditions including a temperature of from ~~about~~ 100°C to ~~about~~ 200°C and a time from ~~about~~ 1 to ~~about~~ 28 days until crystals of said material are formed; and

(iii) recovering said crystalline material from step (ii).

~~11.~~8. The process of claim ~~10~~ 7 where the source of fluoride ions is one or more of HF, NH_4F, and NH_4HF_2.

~~12.~~9. A process for converting a feedstock comprising an organic compound to a conversion product which comprises contacting said feedstock at organic compound conversion conditions with a catalyst comprising an active form of the molecular sieve material of claim 1.

~~13.~~10. A process for synthesizing a crystalline molecular sieve material of claim 1 comprising the steps of :

(a) providing a synthesis mixture capable of forming the crystalline molecular sieve material, including in said mixture an organic directing agent Q selected from the group consisting of 1-methyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-ethyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-propyl-4-(pyrrolidin-1-yl)pyridinium cations, 1-butyl-4-(pyrrolidin-1-yl)pyridinium cations and mixtures thereof; and

(b) heating said synthesis mixture under crystallization conditions until crystals of said molecular sieve material are formed containing said organic directing agent Q within the crystalline structure of the molecular sieve material.

~~14.~~11. The process of claim ~~13~~10, wherein said synthesis mixture in step (a) further includes water, a source of hydroxyl ions, a source of an oxide of a tetravalent element Y, optionally a source of a trivalent element X, and optionally a source of fluoride ions, and having a composition, in terms of mole ratios, in the following amounts and/or ranges:

YO_2/X_2O_3	at least 30;
H_2O/YO_2	4 to 10;
OH^-/YO_2	0.1 to 1;
F/YO_2	0 to 1; and
Q/YO_2	0.1 to 1;

~~15.~~12. The process of claims ~~13~~ 10 and claim ~~14~~ 11, wherein said crystallization conditions include a temperature of from ~~about~~ 100°C to ~~about~~ 200°C and a time from ~~about~~ 1 to ~~about~~ 28 days.

~~16.~~13. The process of any one of claims ~~13~~ 10 to ~~15~~ 12, further comprising the step of:

(c) recovering said crystalline material from step (b).