We claim:

1. An SCM-11 molecular sieve, having an empirical chemical composition as illustrated by the formula " the first oxide · the second oxide ", wherein the first oxide is silica, the second oxide is a combination of germanium dioxide and at least one selected from the group consisting of alumina, boron oxide, iron oxide, gallium oxide, titanium oxide, rare earth oxides, indium oxide and vanadium oxide, a molar ratio of the first oxide to the second oxide is 3-1000, and the molecular sieve has X-ray diffraction pattern as substantially illustrated in the following table,

2θ (°) [(a)]	d-spacing (Å)	Relative intensity ($I/I_0 \times 100$)
6.31	13.99	vs
7.20	12.27	w-m
7.97	11.09	m-s
9.43	9.37	w
12.63	7.00	w-m
18.05	4.91	m
22.98	3.87	m-s

(a):±0.30°.

2. The molecular sieve according to Claim 1, wherein the X-ray diffraction pattern further includes X-ray diffraction peaks as substantially illustrated in the following table,

2θ (°) [(a)]	d-spacing (Å)	Relative intensity ($I/I_0 \times 100$)
12.86	6.88	w-m
18.27	4.85	w
19.01	4.67	s
19.91	4.46	w
21.03	4.22	m-s
22.06	4.03	w
23.33	3.81	w
24.60	3.62	m
25.39	3.51	m
25.89	3.44	w-m
26.65	3.34	m-s
27.96	3.19	w

(a):±0.30°.

3. The molecular sieve according to Claim 1, wherein the molecular sieve has a specific surface area of 300-650 m^2/g and a micropore volume of 0.08-0.26 cm^3/g.

4. The molecular sieve according to Claim 1, wherein the molecular sieve has a ring channel in the range of from 8-membered ring to 14-membered ring, and a

pore size (measured by the Argon adsorption method) of 0.54-0.80nm.

5. The molecular sieve according to Claim 1, having signal peaks at the wave number of 384±10 and at the wave number of 487±10 in the UV Raman spectroscopy thereof.

6. A molecular sieve composition, comprising the molecular sieve according to Claim 1 and a binder.

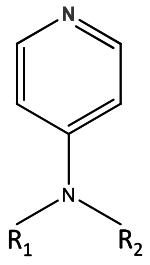
7. A method of converting an organic compound, comprising contacting the organic compound with a catalyst comprising the molecular sieve according to Claim 1.

8. The method of Claim 7, wherein the catalyst is an alkane isomerization catalyst, a catalyst for the alkylation between olefins and aromatics, an olefin isomerization catalyst, a naphtha cracking catalyst, a catalyst for the alkylation between alcohols and aromatics, an olefin hydration catalyst, or an aromatic disproportionation catalyst.

9. A method of separating a component from a mixture, comprising contacting the mixture with an adsorbent comprising the molecular sieve of Claim 1.

10. The molecular sieve according to Claim 1, wherein the second oxide is a combination of germanium dioxide and alumina and the molar ratio of the first oxide to the second oxide satisfies $SiO_2/GeO_2>3$ and $(SiO_2+GeO_2)/Al_2O_3>5$.

11. An SCM-11 molecular sieve, in the synthesized form having an empirical chemical composition as illustrated by the formula " the first oxide · the second oxide · the organic template ·water ", wherein the first oxide is silica, the second oxide is a combination of germanium dioxide and at least one selected from the group consisting of alumina, boron oxide, iron oxide, gallium oxide, titanium oxide, rare earth oxides, indium oxide and vanadium oxide, a molar ratio of the first oxide to the second oxide is 3-1000, a ratio by weight of the organic template to the first oxide is 0.05-0.33, a ratio by weight of water to the first oxide is 0-0.15, wherein the organic template is selected from a compound represented by the following formula (A), a quaternary ammonium salt thereof and a quaternary ammonium hydroxide thereof,



(A)

wherein R_1 and R_2 are identical to or different from each other, each independently representing a C_{1-2} alkyl,

and the molecular sieve has X-ray diffraction pattern as substantially illustrated in the following table,

2θ (°) [a]	d-spacing (Å)	Relative intensity ($I/I_0 \times 100$)
6.32	13.97	vs
7.14	12.36	s
7.88	11.22	vs

9.33	9.47	m
12.63	7.00	w-m
18.05	4.91	m-s
23.02	3.86	m

(a):±0.30°.

12. The molecular sieve according to Claim 11, wherein the X-ray diffraction pattern further includes X-ray diffraction peaks as substantially illustrated in the following table,

2θ (°) [(a)]	d-spacing (Å)	Relative intensity ($I/I_0 \times 100$)
6.87	12.86	m-s
14.25	6.21	w-m
18.67	4.75	m-s
19.71	4.50	w-m
20.72	4.28	s
21.60	4.11	m
24.33	3.66	m
25.21	3.53	m-s
25.57	3.48	m
26.12	3.41	m
26.47	3.36	s
27.62	3.23	w

(a):±0.30°.

13. The molecular sieve according to Claim 11, wherein the molecular sieve has a specific surface area of 300-650m^2/g, and a micropore volume of 0.08-0.26 cm^3/g.

14. The molecular sieve according to Claim 11, wherein the molecular sieve has a ring channel in the range of from 8-membered ring to 14-membered ring, and a pore size (measured by the Argon adsorption method) of 0.54-0.80nm.

15. The molecular sieve according to Claim 11, having signal peaks at the wave number of 384±10 and at the wave number of 487±10 in the UV Raman spectroscopy thereof.

16. The molecular sieve according to Claim 11, wherein the second oxide is a combination of germanium dioxide and alumina and the molar ratio of the first oxide to the second oxide satisfies $SiO_2/GeO_2>3$ and $(SiO_2+GeO_2)/Al_2O_3>5$.

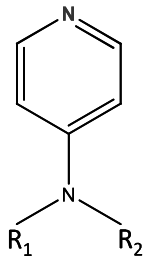
17. A process for producing an SCM-11 molecular sieve, comprising:

a step of contacting, under multiple step crystallization conditions, a first oxide source, a second oxide source, an organic template, a fluorine source and water, to obtain a molecular sieve, and optionally,

a step of calcining the obtained molecular sieve,

wherein the first oxide source is a silicon source, the second oxide source is a combination of the germanium source and the aluminum source,

wherein the multiple step crystallization conditions comprise crystallizating at 80-110 degrees Celsius for 8 hours to 2 days, and then at 120-160 degrees Celsius for 1-10 days, wherein the organic template is selected from a compound represented by the following formula (A), a quaternary ammonium salt thereof and a quaternary ammonium hydroxide thereof,



(A)

wherein R_1 and R_2 are identical to or different from each other, each independently representing a C_{1-2} alkyl, and a ratio molar of the first oxide source (as the first oxide), the second oxide source (as the second oxide), the organic template, the fluorine source (as F) and water is 1:(0.001-1/3):(0.1-1.0):(0.1-1.0):(4-40).

18. The process according to Claim 17, wherein the multiple step crystallization conditions comprise: firstly crystallizing at 80-110 degrees Celsius for 12-36 hours, and then at 120-135 degrees Celsius for 4-36 hours, finally at 140-160 degrees Celsius for 1-7 days.

19. The process according to Claim 17, wherein the silicon source is at least one selected from the group consisting of silicic acid, silica gel, silica sol, tetralkoxysilane, and water glass, the germanium source is at least one selected from the group consisting of tetralkoxy germanium, germanium dioxide and germanium nitrate, the aluminum source is at least one selected from the group consisting of aluminum hydroxide, sodium aluminate, aluminum salts, aluminum alkoxides, kaolin and montmorillonite, the aluminum salts is at least one selected from the group consisting of aluminum sulfate, aluminum nitrate, aluminum carbonate, aluminum phosphate, aluminum chloride, and alum, the aluminum alkoxides is at least one selected from the group consisting of aluminum isopropoxide, aluminum ethoxide, and aluminum butoxide.

20. The process according to Claim 17, wherein the molar ratio of the first oxide source (as the first oxide), the second oxide source (as the second oxide), the organic template, the fluorine source (as F) and water is 1:(0.0025-0.25):(0.1-0.8):(0.1-1.0):(4-40).

21. A molecular sieve composition, comprising the molecular sieve produced in line with the process according to Claim 17, and a binder.