CLAIMS

1. A method for preparing aluminosilicate zeolite SSZ-33 comprising contacting under crystallization conditions (1) at least one source of silicon; (2) at least one source of aluminum; (3) hydroxide ions; and (4) a ~~1,1'-(pentane-1,5-diyl)bis(1-methylcyclohexyl)piperidinium~~1,1'-(pentane-1,5-diyl)bis(3-methylcyclohexyl)piperidinium dication.

2. The method of claim 1, wherein the zeolite is prepared from a reaction mixture comprising, in terms of mole ratios, the following:

SiO_2/Al_2O_3	10 to 200
OH^-/SiO_2	0.10 to 1.0
Q/SiO_2	0.05 to 0.50
M/SiO_2	0.05 to 0.30
H_2O/SiO_2	15 to 300

wherein Q is a 1,1'-(pentane-1,5-diyl)bis(3-methylcyclohexyl)piperidinium dication and M is selected from the group consisting of elements from Groups 1 and 2 of the Periodic Table.

3. The method of claim 1, wherein the zeolite is prepared from a reaction mixture comprising, in terms of mole ratios, the following:

SiO_2/Al_2O_3	30 to 60
OH^-/SiO_2	0.20 to 0.30
Q/SiO_2	0.10 to 0.25
M/SiO_2	0.05 to 0.15
H_2O/SiO_2	25 to 60

wherein Q is a 1,1'-(pentane-1,5-diyl)bis(3-methylcyclohexyl)piperidinium dication and M is selected from the group consisting of elements from Groups 1 and 2 of the Periodic Table.

4. The method of claim 1, wherein the zeolite has, in its calcined form, an X-ray diffraction pattern substantially as shown in the following Table:

2-Theta	d-spacing (nm)	Relative Absolute Intensity
7.76 ± 0.20	1.138	VS
8.04 ± 0.20	1.099	W
8.28 ± 0.20	1.067	W
13.14 ± 0.20	0.673	W
20.24 ± 0.20	0.438	M
21.96 ± 0.20	0.404	M
23.08 ± 0.20	0.385	S
26.48 ± 0.20	0.336	M.

5. An aluminosilicate SSZ-33 zeolite having a composition, as-synthesized and in its anhydrous state, in terms of mole ratios as follows:

SiO_2/Al_2O_3	15 to 200
Q/SiO_2	0.015 to 0.05
M/SiO_2	0 to 0.05

wherein Q is a ~~1,1'-(pentane-1,5-diyl)bis(1-(3-methylcyclohexyl)piperidinium~~ 1,1'-(pentane-1,5-diyl)bis(3-methylcyclohexyl)piperidinium dication and M is selected from the group consisting of elements from Groups 1 and 2 of the Periodic Table.

6. The aluminosilicate SSZ-33 zeolite of claim 5, wherein the zeolite has a composition, as-synthesized and in its anhydrous state, in terms of mole ratios as follows:

SiO_2/Al_2O_3	15 to 100
Q/SiO_2	0.015 to 0.05
M/SiO_2	0 to 0.05.