and under appropriate crystallization conditions. Such reagents and conditions will generally be known to those artisans of ordinary skill.

[084] For the purposes of this specification and appended claims, unless otherwise indicated, all numbers expressing quantities, percentages or proportions, and other numerical values used in the specification and claims, are to be understood as being modified in all instances by the term "about." Accordingly, unless indicated to the contrary, the numerical parameters set forth in the following specification and attached claims are approximations that can vary depending upon the desired properties sought to be obtained by the present invention. It is noted that, as used in this specification and the appended claims, the singular forms "a," "an," and "the," include plural references unless expressly and unequivocally limited to one reference. As used herein, the term "include" and its grammatical variants are intended to be non-limiting, such that recitation of items in a list is not to the exclusion of other like items that can be substituted or added to the listed items.

[085] This written description uses examples to disclose the invention, including the best mode, and also to enable any person skilled in the art to make and use the invention. The patentable scope is defined by the claims, and can include other examples that occur to those skilled in the art. Such other examples are intended to be within the scope of the claims if they have structural elements that do not differ from the literal language of the claims, or if they include equivalent structural elements with insubstantial differences from the literal languages of the claims. ~~To an extent not inconsistent herewith, all citations referred to herein are hereby incorporated by reference.~~

CLAIMS

1. A method for synthesizing a molecular sieve comprising at least one tetravalent framework element and at least one trivalent or pentavalent element, comprising:

a) providing a reaction mixture sufficient to synthesize the molecular sieve;

b) maintaining the reaction mixture under crystallization conditions;

c) monitoring at least one viscometric parameter of the reaction mixture, wherein the monitoring step comprises:

(1) periodically removing a sample of the reaction mixture; cooling each sample to a pre-defined temperature; and measuring the at least one viscometric parameter of each sample; or

(2) periodically removing a sample of the reaction mixture; subjecting each sample to a plurality of shear rates; recording a shear stress corresponding to each of the plurality of shear rates to provide a plurality of shear stress values; and determining a viscosity shear rate index for each sample; and

d) determining an endpoint based on the monitoring of the at least one viscometric parameter.

2. The method of claim 1, wherein the reaction mixture contains at least 8 wt. % reactant solids.

3. The method of claim 1, wherein the reaction mixture contains at least 10 wt. % reactant solids.

4. The method of claim 1, wherein the at least one viscometric parameter is selected from the group consisting of viscosity shear rate index, measured viscosity, and combinations thereof.

5. The method of claim 1, wherein the monitoring step comprises:

a) periodically removing a sample of the reaction mixture;

b) cooling each sample to a pre-defined temperature; and

c) measuring the at least viscosity parameter of each sample.

6. The method of claim 1, wherein the monitoring step comprises:

a) periodically removing a sample of the reaction mixture;

b) subjecting each sample to a plurality of shear rates;

c) recording a shear stress corresponding to each of the plurality of shear rates to provide a plurality of shear stress values; and

d) determining a viscosity shear rate index for each sample.

7. The method of claim 1, wherein the endpoint is determined based on a change in measured viscosity of the reaction mixture, a change in viscosity shear rate index of the reaction mixture, and combinations thereof.

~~8. A method for monitoring crystallization of a molecular sieve from a reaction mixture during a molecular sieve synthesis process, the method comprising:~~

~~a) monitoring at least one viscometric parameter of the reaction mixture; and~~

~~b) determining an endpoint of the molecular sieve synthesis process.~~

~~9. The method of claim 8, wherein the at least one viscometric parameter is selected from the group consisting of viscosity shear rate index, measured viscosity, and combinations thereof.~~

~~10. The method of claim 8, wherein the endpoint of the molecular sieve synthesis process is determined based on a change in measured viscosity of the reaction mixture, a change in viscosity shear rate index of the reaction mixture, a change in pH of the reaction mixture, and combinations thereof.~~