We claim:

1. A process for producing an acrylate product, the process comprising the steps of:

contacting an alkanoic acid and an alkylenating agent over a catalyst under conditions effective to produce the acrylate product,

wherein the catalyst comprises vanadium, bismuth, ~~and~~ tungsten~~.~~, phosphorus, and oxygen,

wherein the catalyst corresponds to the formula

$$V_aBi_bW_cP_dO_e,$$

wherein

a is from 1 to 100,

b is from 0.1 to 30,

c is from 0.1 to 30,

d is from 1.0 to 175, and

e is from 5 to 710.

2. The process of claim 1, wherein the alkylenating agent comprises a methylenating agent.

3. The process of claim 1, wherein the alkanoic acid comprises acetic acid.

4. The process of claim 1, wherein the molar ratio of alkanoic acid to alkylenating agent is at least 0.50:1.

5. The process of claim 1, wherein the overall alkanoic acid conversion is at least 15 mol%.

6. The process of claim 1, wherein the acrylic acid selectivity is at least 30%.

7. The process of claim 1, wherein the space time yield of the combination of acrylic acid and acrylates is at least 50 grams per liter of catalyst per hour.

8. The process of claim 1, wherein the yield of acrylic acid based on alkanoic acid conversion is at least 20%.

9. A process for producing a catalyst composition, the process comprising the steps of:

contacting a bismuth salt, a tungsten salt, and a vanadium precursor solution to form a wet catalyst composition; and

drying the catalyst composition to form a dried catalyst composition comprising vanadium, bismuth, ~~and~~ tungsten., phosphorus, and oxygen,

wherein the catalyst corresponds to the formula

$$V_aBi_bW_cP_dO_e,$$

wherein

a is from 1 to 100,

b is from 0.1 to 30,

c is from 0.1 to 30,

d is from 1.0 to 175, and

e is from 5 to 710.

10. The process of claim 9, further comprising the step of:

mixing the vanadium precursor and a reductant solution to form the vanadium precursor solution.

11. The process of claim 9, wherein the contacting comprises:

contacting a binder with the bismuth salt, the tungsten salt, and/or the vanadium precursor solution to form the wet catalyst composition.

12. The process of claim 9, wherein the contacting comprises contacting phosphoric acid with the bismuth salt, the tungsten salt, and/or the vanadium precursor solution to form the wet catalyst composition.

13. The process of claim 9, further comprising calcining the dried catalyst in accordance with a temperature profile to form a dried catalyst composition.

~~14. A catalyst composition, comprising an active phase comprising:~~

~~vanadium,~~

~~bismuth, and~~

~~tungsten, wherein the catalyst composition is suitable for use in an aldol condensation of an alkanoic acid and an alkylenating agent to form an acrylate product.~~

14. A catalyst composition, comprising an active phase comprising:

vanadium, bismuth, tungsten, phosphorus, and oxygen

wherein the catalyst corresponds to the formula

$$V_aBi_bW_cP_dO_e,$$

wherein

a is from 1 to 100,

b is from 0.1 to 30,

c is from 0.1 to 30,

d is from 1.0 to 175, and

e is from 5 to 710.

15. The composition of claim 14, wherein a the molar ratio of vanadium to tungsten in the active phase of the catalyst composition is at least 0.033:1, and wherein a the molar ratio of bismuth to tungsten in the active phase of the catalyst composition is greater than 0.0033:1.

16. The composition of claim 14, wherein the active phase further comprises:

from 10 wt% to 22 wt% phosphorus; and

from 15 wt% to 50 wt% oxygen~~.~~, based on the total weight of the active phase.

17. The composition of claim 14, wherein the active phase comprises less than 5 wt% titanium~~.~~, based on the total weight of the active phase.

18. The composition of claim 14, wherein the active phase comprises at least 0.7 wt% vanadium and bismuth, combined~~.~~, based on the total weight of the active phase.

19. The composition of claim 14, wherein the active phase comprises at least 0.7 wt% vanadium and tungsten, combined., based on the total weight of the active phase.

~~20. The composition of claim 14, wherein the catalyst corresponds to the formula $V_aBi_bW_cP_dO_e$,~~

~~wherein~~

~~a is from 1 to 100,~~

~~b is from 0.1 to 30,~~

~~c is from 0.1 to 30,~~

~~d is from 1.0 to 175, and~~

~~e is from 5 to 710.~~