## CLAIMS

1. A method, comprising:

providing an olefin feedstock composition comprising a linear internal olefin;

providing a catalyst composition comprising an olefin metathesis catalyst;

reacting the olefin feedstock composition and ethylene at metathesis reaction conditions in the presence of the catalyst composition to produce an alpha-olefin product comprising 1-decene and one or more alpha-olefins having fewer carbon atoms than the linear internal olefin;

separating the one or more alpha-olefins from the alpha-olefin product using a distillation process; and

polymerizing the separated alpha-olefin product in the presence of a catalyst to form a drag reducing agent.

2. The method of claim 1, wherein the alpha-olefin product further comprises the alpha-mono-olefin having the same number of carbon atoms as the linear internal olefin.

3. The method of claim 1, wherein the one or more alpha-olefins having fewer carbon atoms than the linear internal olefin comprise $C_4$-$C_7$ alpha-olefins.

4. The method of claim 1, wherein the one or more alpha-olefins having fewer carbon atoms than the linear internal olefin include at least one of alpha-mono-olefins and diolefins.

5. The method of claim 1, wherein the olefin metathesis catalyst is a transition metal complex comprising a metal selected from the group consisting of Ni, W, Ru, Mo, Re, and combinations thereof.

6. The method of claim 5, wherein the olefin metathesis catalyst is a transition metal complex comprising Ru.

7. The method of claim 1, wherein the olefin metathesis catalyst is a Grubb's catalyst, a Schrock catalyst, or a Hoveyda catalyst.

8. The method of claim 1, wherein the olefin metathesis catalyst is selected from a ruthenium carbene metathesis catalyst and a molybdenum carbene metathesis catalyst.

9. The method of claim 1, wherein the olefin metathesis catalyst is dichloro(phenylmethylene) bis(tricyclohexylphosphine) ruthenium or 1,3-bis-(2,4,6-trimethylphenyl)-2-(imidazolidinylidene)(phenylmethylene)-dichloro(tricyclohexylphosphine)ruthenium.

10. The method of claim 1, wherein the metathesis reaction conditions comprises a metathesis reaction temperature ranging from the melting point of the olefin feedstock to 120 degrees Celsius.

11. The method of claim 1, wherein the alpha-mono-olefin has from 4 to 20 carbon atoms.

12. A method, comprising:

providing an olefin feedstock composition comprising 3-dodecene and optionally at least one of an alpha-olefin having at least 12 carbon atoms, a vinylidene having at least 12 carbon atoms, a diolefin having at least 12 carbon atoms, and/or a triolefin having at least 12 carbon atoms;

providing a catalyst composition comprising an olefin metathesis catalyst; and

reacting the olefin feedstock composition and ethylene at metathesis reaction conditions in the presence of the catalyst composition to produce an alpha-olefin product comprising 1-decene, and one or more alpha-olefins having fewer carbon atoms than 1-decene.

13. The method of claim 12, further comprising separating the one or more alpha-olefins from the alpha-olefin product using a distillation process.

14. The method of claim 12, wherein the one or more alpha-olefins having fewer carbon atoms than 1-decene comprise $C_4$-$C_7$ alpha-olefins.

15. The method of claim 12, wherein the one or more alpha-olefins having fewer carbon atoms than the 1-decene comprise at least one of alpha-mono-olefins and diolefins.

16. The method of claim 12, wherein the olefin metathesis catalyst is a transition metal complex comprising a metal selected from the group consisting of Ni, W, Ru, Mo, Re, and combinations thereof.

17. The method of claim 12, wherein the olefin metathesis catalyst is a Grubb's catalyst, a Schrock catalyst, or a Hoveyda catalyst.

18. The method of claim 12, wherein the olefin metathesis catalyst is selected from a ruthenium carbene metathesis catalyst and a molybdenum carbene metathesis catalyst.

19. The method of claim 12, further comprising polymerizing the alpha-olefin product in the presence of a catalyst to form a drag reducing agent.

20. A method comprising:

providing an olefin feedstock composition comprising a linear internal-mono-olefin and at least one of an alpha-olefin having more than 10 carbon atoms, a vinylidene olefin, a diolefin, a triolefin, and combinations thereof;

providing a catalyst composition comprising an olefin metathesis catalyst; and

reacting the olefin feedstock composition and ethylene at metathesis reaction conditions in the presence of the catalyst composition to produce an alpha-olefin product comprising an alpha-mono-olefin and one or more alpha-olefins having fewer carbon atoms than the alpha mono-olefin.

21. The method of claim 20, further comprising separating the alpha-mono-olefin in the alpha-olefin product from the one or more alpha-olefins having fewer carbon atoms than the alpha mono-olefin using a distillation process.

22. The method of claim 20, wherein the one or more alpha-olefins having fewer carbon atoms than the alpha-mono-olefin comprise $C_4$-$C_7$ alpha-olefins.

23. The method of claim 20, wherein the one or more alpha-olefins having fewer carbon atoms than the alpha-mono-olefin include at least one of alpha-mono-olefins and diolefins.

24. The method of claim 20, wherein the alpha-mono-olefin is 1-decene.

25. The method of claim 20, wherein the alpha-mono-olefin having more than 10 carbon atoms has 12 carbon atoms.

26. The method of claim 1, wherein the olefin feedstock composition further comprises at least one of an alpha-mono-olefin having the same number of carbon atoms as the linear internal olefin, a vinylidene, a diolefin having the same number of carbon atoms as the linear internal olefin, and/or a triolefin having the same number of carbon atoms as the linear internal olefin.

27. A method, comprising:

providing an olefin feedstock composition comprising a linear internal olefin and optionally at least one of an alpha-mono-olefin having the same number of carbon atoms as the linear internal olefin, a vinylidene, a diolefin having the same number of carbon atoms as the linear internal olefin, and/or a triolefin having the same number of carbon atoms as the linear internal olefin;

providing a catalyst composition comprising an olefin metathesis catalyst;

reacting the olefin feedstock composition and ethylene at metathesis reaction conditions in the presence of the catalyst composition to produce an alpha-olefin product comprising 1-decene and one or more $C_4$-$C_7$ alpha-olefins; and

separating the one or more $C_4$-$C_7$ alpha-olefins from the alpha-olefin product using a distillation process.

28. The method of claim 3, wherein the metathesis reaction conditions comprises a metathesis reaction temperature ranging from the melting point of the olefin feedstock to 120 degrees Celsius.