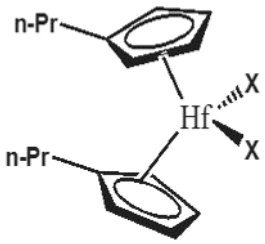
Claims

What is claimed:

1. A method for adjusting melt index, the method comprising:

activating a metallocene complex represented by Formula I:



Formula I

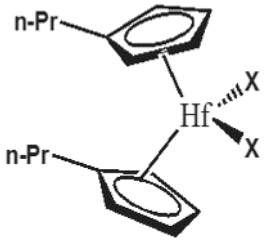
wherein each n-Pr is n-propyl, and each X is independently CH_3, Cl, Br, or F to provide an activated metallocene complex;

contacting a monomer and a comonomer with the activated metallocene complex to produce a first polymer having a predetermined density and a first melt index, wherein the monomer is present at a monomer concentration and the comonomer is present at a comonomer concentration and hydrogen is present at a hydrogen concentration; and

reducing the hydrogen concentration to produce a second polymer having the predetermined density and a second melt index that is lesser than the first melt index, wherein comonomer consumption is reduced from 10 to 35 percent on a mass basis.

2. A method for adjusting density, the method comprising:

activating a metallocene complex represented by Formula I:



Formula I

wherein each n-Pr is n-propyl, and each X is independently CH_3, Cl, Br, or F to provide an activated metallocene complex;

contacting a monomer and a comonomer with the activated metallocene complex in the presence of hydrogen to produce a first polymer having a first density and a first melt index, wherein the hydrogen is present at a first hydrogen concentration, monomer is present at a monomer concentration, and the comonomer is present at a comonomer concentration; and

reducing the first hydrogen concentration to a second hydrogen concentration while maintaining the monomer consumption to produce a second polymer having a second density that is lesser than the first density and a second melt index that is lesser than the first melt index.

3. The method of claim 1, wherein the hydrogen concentration is reduced from 10 to 40 weight percent.

4. The method of claim 1, wherein the monomer is ethylene and the comonomer is 1-hexene.

5. The method of claim 2, wherein the hydrogen concentration is reduced from 10 to 40 weight percent.

6. The method of claim 2, wherein the monomer is ethylene and the comonomer is 1-hexene.