What is claimed is:

1. A method of preparing a composite catalyst for polyester synthesis, comprising the steps of:

1) performing a hydrolysis reaction by dissolving a titanium compound, a silicon compound and a tin compound in an organic solvent and adding therein a water solution of an acidic compound or a water solution of an alkaline compound at a temperature of 15 °C ~ 30 °C for 0.5 hour ~ 1 hour, wherein the water solution of the acidic compound has a pH of 1 ~ 4 and the water solution of the alkaline compound has a pH of 11 ~ 14; and

2) collecting, after the hydrolysis reaction, a hydrolysis precipitate and washing the hydrolysis precipitate with a deionized water to obtain the composite catalyst,

wherein the titanium compound is of a formula of $Ti(OR^1)_4$, where R^1 is C_{2-4}-alkeyl;

wherein the silicon compound is of a formula of $Si(OR^2)_4$, where R^2 is C_{2-4}-alkeyl;

wherein the tin compound is tin tetrachloride;

wherein a molar ratio of the silicon compound to the titanium compound is 0.05:1 ~ 0.5:1; and

wherein a molar ratio of the tin compound to the titanium compound is 0.1:1 ~ 5:1.

2. The method of claim 1, wherein the organic solvent is selected from the group consisting of C_{1-6}-monohydric alcohols and C_{1-6}-polyhydric alcohols, and a molar ratio of the organic solvent to a total of the titanium compound, the silicon compound and the tin compound is 10:1 ~ 40:1.

3. The method of claim 2, wherein the organic solvent is selected from the group consisting of methanol, ethanol, isopropanol, isobutanol, hexanol, glycol, butanediol,

hexanediol and glycerol.

4. The method of claim 3, wherein the organic solvent is ethanol.

5. The method of claim 2, wherein the molar ratio of the organic solvent to the total of the titanium compound, the silicon compound and the tin compound is 15:1 ~ 20:1.

6. The method of claim 1, wherein the acidic compound is selected from the group consisting of phosphoric acid, hydrochloric acid, sulfuric acid and acetic acid, and the alkaline compound is selected from the group consisting of ammonium hydroxide, sodium hydroxide and potassium hydroxide.

7. The method of claim 1, wherein the titanium compound is selected from the group consisting of tetraethyl titanate, tetrapropyl titanate, tetraisopropyl titanate and tetrabutyl titanate.

8. The method of claim 1, wherein the silicon compound is selected from the group consisting of tetraethyl orthosilicate and tetrabutyl orthosilicate.

9. The method of claim 1, wherein a molar ratio of the silicon compound to the titanium compound is 0.06:1 ~ 0.1:1, and a molar ratio of the tin compound to the titanium compound is 0.5:1 ~ 1:1.

Claims:

1. A method of preparing a catalyst for synthesis, comprising the steps of:

dissolving 17.0 g of tetrabutyl titanate, 1.2 g of tetraethyl orthosilicate and 6.5 g of tin tetrachloride in a first 86 ml of anhydrous ethanol to produce a solution A; adding 9.0 g of deionized water, having an appropriate amount of a phosphoric acid solution and having a pH of 1, in a second 86 ml of anhydrous ethanol to produce a solution B; titrating the solution B in the solution A in 0.5 hour with sufficient stirring at a temperature of 15 °C to produce a white precipitate; further stirring the mixture for one hour and thereafter centrifuging the mixture to separate the white precipitate; washing the white precipitate 3 times with water and drying the white precipitate for 24 hours at a temperature of 70 °C to obtain the catalyst.

2. A method of preparing a catalyst for synthesis, comprising the steps of:

dissolving 27.2 g of tetrabutyl titanate, 1.5 g of tetraethyl orthosilicate and 15.6 g of tin tetrachloride in a first 134 ml of anhydrous ethanol to produce a solution A; adding 20.9 g of deionized water, having an appropriate amount of a hydrochloric acid solution and having a pH of 4, in a second 134 ml of anhydrous ethanol to produce a solution B; titrating the solution B in the solution A in 0.5 hour with sufficient stirring at a temperature of 20 °C to produce a white precipitate; further stirring the mixture for 45 minutes and thereafter centrifuging the mixture to separate the white precipitate; washing the white precipitate 3 times with water and drying the white precipitate for 24 hours at a temperature of 70 °C to obtain the catalyst.

3. A method of preparing a catalyst for synthesis, comprising the steps of:

dissolving 22.7 g of tetrabutyl titanate, 2.2 g of tetraethyl orthosilicate and 20.8 g of tin tetrachloride in a first 139 ml of anhydrous ethanol to produce a solution A; adding 18.1 g of deionized water, having an appropriate amount of an ammonium hydroxide solution and having a pH of 11, in a second 139 ml of anhydrous ethanol to produce a solution B; titrating the solution B in the solution A in 0.5 hour with sufficient stirring at a temperature of 30 °C to produce a white precipitate; further stirring the mixture for one hour and thereafter centrifuging the mixture to separate the white precipitate; washing the white precipitate 3 times with water and drying the white precipitate for 24 hours at a temperature of 70 °C to obtain the catalyst.

4. A method of preparing a catalyst for synthesis, comprising the steps of:

dissolving 14.2 g of tetrabutyl titanate, 0.8 g of tetraethyl orthosilicate and 13.0 g of tin tetrachloride in a first 230 ml of anhydrous ethanol to produce a solution A; adding 36.0 g of deionized water, having an appropriate amount of a sodium hydroxide solution and having a pH of 14, in a second 230 ml of anhydrous ethanol to produce a solution B; titrating the solution B in the solution A in 0.5 hour with sufficient stirring at a temperature of 25 °C to produce a white precipitate; further stirring the mixture for one hour and thereafter centrifuging the mixture to separate the white precipitate; washing the white precipitate 3 times with water and drying the white precipitate for 24 hours at a temperature of 70 °C to obtain the catalyst.