WHAT IS CLAIMED IS:

1. A method for preparing a light olefin using an oxygen-containing compound, comprising the following steps:

step a) in which a raw material comprising the oxygen-containing compound is introduced in parallel from n feeding branch lines into 1^{st} to n^{th} secondary reaction zones in a dense phase fluidized bed reactor, and is brought into contact with a catalyst to generate a light olefin product-containing stream and a spent catalyst, wherein said catalyst is sequentially passed through 1^{st} to n^{th} secondary reaction zones, with the carbon content thereof increasing gradually, and wherein said dense phase fluidized bed reactor is divided by a material flow controller into n secondary reaction zones;

step b) in which the light olefin product-containing stream flowed out from the 1^{st} to n^{th} secondary reaction zones is separated from the spent catalyst that it carries; said light olefin product-containing stream is passed into a product separation section, and after separation and purification, a light olefin product is obtained; the isolated spent catalyst is passed into the n^{th} secondary reaction zone; and

step c) in which the spent catalyst flowed out from the n^{th} secondary reaction zone, after being stripped and lifted, is passed into a dense phase fluidized bed regenerator for regeneration; said spent catalyst is sequentially passed through 1^{st} to m^{th} secondary regeneration zones; a regeneration medium is introduced in parallel from m feeding branch lines of regeneration zone into the 1^{st} to m^{th} secondary regeneration zones; the spent catalyst is brought into contact with the regeneration medium, with the carbon content thereof decreasing gradually; after the completion of the regeneration, the catalyst is returned back to the 1^{st} secondary reaction zone via stripping and lifting; wherein the dense phase fluidized bed regenerator is divided by a material flow controller into m secondary regeneration zones;

wherein $n \geq 2$ and $m \geq 2$, and

wherein the oxygen-containing compound is methanol and/or dimethyl ether.

2. The method according to claim 1, characterized in that $8 \geq n \geq 3$ and $8 \geq m \geq 3$.

3. The method according to claim 1, characterized in that, in the dense phase fluidized bed reactor, the apparent linear velocity of gas in the material flow controller is less than or equals to the minimum fluidizing velocity of the catalyst.

4. The method according to claim 1, characterized in that, in the dense phase fluidized bed regenerator, the apparent linear velocity of gas in the material flow controller is less than or equals to the minimum fluidizing velocity of the catalyst.

5. The method according to claim 1, characterized in that the catalyst comprises SAPO-34 molecular sieve.

6. The method according to claim 1, characterized in that the reaction conditions in the dense phase fluidized bed reaction zone are as follows: the apparent linear velocity of gas is 0.1-1.5 m/s, the reaction temperature is 400-550 ℃, and the bed density is 200-1200 kg/m^3.

7. The method according to claim 1, characterized in that the average carbon deposition amount of the catalyst is increased sequentially in the 1^{st} to n^{th} secondary reaction zones of the dense phase fluidized bed, wherein the average carbon deposition amount of the catalyst in the 1^{st} secondary reaction zone is 0.5-3 wt%, and the average carbon deposition amount of the catalyst in the n^{th} secondary reaction zone is 7-10 wt%.

8. The method according to claim 1, characterized in that the reaction conditions in the dense phase fluidized bed regeneration zone are as follows: the apparent linear velocity of gas is 0.1-1.5 m/s, the regeneration temperature is 500-700 ℃, and the bed density is 200-1200 kg/m^3.

9. The method according to claim 1, characterized in that the average carbon deposition amount of the catalyst is decreased sequentially from the 1^{st}

to m^{th} secondary regeneration zones of the dense phase fluidized bed regeneration zone, wherein the average carbon deposition amount of the catalyst in the 1^{st} secondary regeneration zone is 3-10 wt%, and the average carbon deposition amount of the catalyst in the m^{th} secondary regeneration zone is 0-3 wt%.

10. The method according to claim 1, characterized in that ~~the oxygen-containing compound is methanol and/or dimethyl ether;~~ the light olefin is any one of ethylene, propylene or butylene, or a mixture thereof; and the regeneration medium is any one of air, oxygen-deficient air or water vapor, or a mixture thereof.

11. A dense phase fluidized bed reactor used for carrying out the method according to any one of claims 1-9, said dense phase fluidized bed reactor comprising a reaction zone, a gas-solid separation zone, and a stripping zone, characterized in that the reaction zone is divided by a material flow controller into n secondary reaction zones, wherein $n \geq 2$.

12. A dense phase fluidized bed regenerator used for carrying out the method according to any one of claims 1-9, the dense phase fluidized bed regenerator comprising a regeneration zone, a gas-solid separation zone, and a stripping zone, characterized in that the regeneration zone is divided by a material flow controller into m secondary regeneration zones, wherein $m \geq 2$.