CLAIMS:

1. A composite oxide target, comprising magnesium oxide and titanium (II) oxide,

wherein a total atom number of the magnesium oxide is more than or equal to 5 atomic percent and less than or equal to 90 atomic percent and a total atom number of the titanium (II) oxide is more than or equal to 10 atomic percent and less than or equal to 95 atomic percent based on a total atom number of the composite oxide target; and

wherein the composite oxide target includes multiple black phases including the magnesium oxide, the average grain size of the black phases is less than or equal to 2 micrometers, and the variance of the grain size of the black phases is less than 0.2.

2. The composite oxide target as claimed in claim 1, comprising an additive, wherein the additive is a first additive, a second additive, or a combination thereof, the first additive is selected from the group consisting of aluminum oxide, zirconium dioxide, chromium(III) oxide, silicon dioxide, and any combination thereof, and the second additive is selected from the group consisting of aluminum, zirconium, chromium, silicon, and any combination thereof.

3. The composite oxide target as claimed in claim 2, wherein a total atom number of the additive is more than or equal to 1 atomic percent and less than or equal to 6 atomic percent based on the total atom number of the composite oxide target.

4. The composite oxide target as claimed in any one of claims 1 to

3, wherein the bending strength of the composite oxide target is more than 100 million pascals.

5. The composite oxide target as claimed in any one of claims 1 to 4, wherein the thermal conductivity of the composite oxide target is more than 10 watts per meter per kelvin.

6. A method of manufacturing a composite oxide target, comprising the following steps:

preparing magnesium oxide powders and titanium (II) oxide powders, wherein particle sizes of the magnesium oxide powders are more than or equal to 2 micrometers and less than or equal to 5 micrometers, and particle sizes of the titanium (II) oxide powders are more than or equal to 2 micrometers and less than or equal to 10 micrometers;

mixing the magnesium oxide powders and the titanium (II) oxide powders to obtain a powdered mixture, wherein a total atom number of the magnesium oxide powders is more than or equal to 5 atomic percent and less than or equal to 90 atomic percent and a total atom number of the titanium (II) oxide powders is more than or equal to 10 atomic percent and less than or equal to 95 atomic percent based on a total atom number of the powdered mixture;

grinding the powdered mixture for more than or equal to 48 hours to obtain a fine powdered mixture;

preforming the fine powdered mixture into a green compact; and

sintering the green compact at a temperature ranging from 900°C to 1400°C to obtain the composite oxide target.

7. The method as claimed in claim 6, wherein the method comprises

a step of screening the powdered mixture with a sieve after the step of grinding the powdered mixture for more than or equal to 48 hours to obtain the fine powdered mixture, and the mesh size of the sieve is from 400 mesh to 600 mesh.

8. The method as claimed in claim 6 or 7, wherein the green compact is sintered for 1.5 hours to 5 hours under a pressure ranging from 300 kilograms per square centimeter to 510 kilograms per square centimeter.

9. The method as claimed in any one of claims 6 to 8, wherein the method comprises a step of providing a powdered additive and mixing the magnesium oxide powders, the titanium (II) oxide powders, and the powdered additive to obtain the powdered mixture; wherein the powdered additive comprises a first powdered additive, a second powdered additive, or a combination thereof; the first powdered additive selected from the group consisting of aluminum oxide powders, zirconium dioxide powders, chromium(III) oxide powders, silicon dioxide powders, and any combination thereof; the particle size of the first powdered additive being less than or equal to 3 micrometers; the second powdered additive selected from the group consisting of aluminum powders, zirconium powders, chromium powders, silicon powders, and any combination thereof; the particle size of the second powdered additive being less than or equal to 50 micrometers; and wherein, based on the total atom number of the powdered mixture, a total atom number of the powdered additive is more than or equal to 1 atomic percent and less than or equal to 6 atomic percent.

10. The method as claimed in any one of claims 6 to 9, wherein the

powdered mixture is ground for more than or equal to 48 hours and less than or equal to 120 hours.