WHAT IS CLAIMED IS:

1. A preparation method for a monocrystalline silicon wafer, used for preparing a strip-shaped right-angle monocrystalline silicon wafer and a quasi-square monocrystalline silicon wafer, or preparing a strip-shaped right-angle monocrystalline silicon wafer and a square monocrystalline silicon wafer, comprising the steps of:

Determining the length (a) and the width (b) of a strip-shaped right-angle monocrystalline silicon wafer, determining the side length (L) of a quasi-square or square monocrystalline silicon wafer, and making the width (b) of the strip-shaped right-angle monocrystalline silicon wafer smaller than the side length (L) of the quasi-square or square monocrystalline silicon wafer; determining the diameter (Φ) of a monocrystalline silicon rod, and making the side length (L) of the quasi-square or square monocrystalline silicon wafer smaller than the diameter (Φ) of the monocrystalline silicon rod; determining the length (H) of the monocrystalline silicon rod according to the length (a) of the strip-shaped right-angle monocrystalline silicon wafer, thereby making the length (H) of the monocrystalline silicon rod greater than the length (a) of the strip-shaped right-angle monocrystalline silicon wafer; preparing a cylindrical monocrystalline silicon rod according to the determined diameter (Φ) and length (H) of the monocrystalline silicon rod;

Cutting off the two ends of the monocrystalline silicon rod, and making the length (h) of the residual section of the monocrystalline silicon rod not smaller than the length (a) of the strip-shaped right-angle monocrystalline silicon wafer; square-cutting the residual section of the monocrystalline silicon rod according to the determined side length (L) of the quasi-square or square monocrystalline silicon wafer, thereby obtaining a quasi-square monocrystalline silicon rod used for preparing quasi-square monocrystalline silicon wafers or a square monocrystalline silicon rod used for preparing square monocrystalline silicon wafers, and obtaining four pieces of offcut material, wherein the four pieces of offcut material are cut

along the length direction of the residual section of the monocrystalline silicon rod, and the length of the four pieces of offcut material is equal to the length of the residual section of the monocrystalline silicon rod, wherein each piece of offcut material comprises a rectangular cutting surface formed by the square-cutting and an arc surface opposite to the cutting surface, wherein the cutting surface is a reference surface, and the positions where the cutting surface and the arc surface are joined form sharp corners;

Obtaining quasi-square monocrystalline silicon wafers by slicing the quasi-square monocrystalline silicon rod, or obtaining square monocrystalline silicon wafers by slicing the square monocrystalline silicon rod;

Cutting each piece of offcut material according to the determined length (a) of the strip-shaped right-angle monocrystalline silicon wafer, wherein each piece of offcut material at least comprises a small section of the offcut material, and the length of the reference surface on each small section of offcut material is equal to the length (a) of the strip-shaped right-angle monocrystalline silicon wafer; cutting off the sharp corners on two sides of each small section of offcut material, thereby obtaining a monocrystalline silicon block used for preparing strip-shaped right-angle monocrystalline silicon wafers, and then making the length and width of the reference surface on the monocrystalline silicon block equal to the length and width of the strip-shaped right-angle monocrystalline silicon wafer; slicing the monocrystalline silicon block along a direction parallel to the reference surface on the monocrystalline silicon block, thereby obtaining strip-shaped right-angle monocrystalline silicon wafers.

2. The preparation method for a monocrystalline silicon wafer of claim 1, comprising:

Taking the ratio value (L: b) of the side length (L) of a quasi-square monocrystalline silicon wafer to the width (b) of a strip-shaped right-angle monocrystalline silicon wafer as a first ratio value, and taking the ratio value (Φ: b) of the diameter (Φ) of a monocrystalline silicon rod to the width (b) of the strip-shaped right-angle monocrystalline silicon wafer (b) as a second ratio value;

Determining the width (b) of the strip-shaped right-angle monocrystalline silicon wafer, wherein the first ratio value and the second ratio value are both greater than 1, and the first ratio value is smaller than the second ratio value;

Determining the side length (L) of the quasi-square or square monocrystalline silicon wafer according to the width (b) of the strip-shaped right-angle monocrystalline silicon wafer and the first ratio value;

Determining the diameter (Φ) of the monocrystalline silicon rod according to the width (b) of the strip-shaped right monocrystalline silicon wafer and the second ratio value.

3. The preparation method for a monocrystalline silicon wafer of claim 2, comprising: taking the ratio value (a: b) of the length (a) of the strip-shaped right-angle monocrystalline silicon wafer to the width (b) of the strip-shaped right-angle monocrystalline silicon wafer as a third ratio value; determining the third ratio value, and determining the length (a) of the strip-shaped right-angle monocrystalline silicon wafer according to the width (b) of the strip-shaped right-angle monocrystalline silicon wafer and the third ratio value.
4. The preparation method for a monocrystalline silicon wafer of claim 2 or 3, comprising: determining the first ratio value as well as the difference value between the first ratio value and the second ratio value first, and then determining the second ratio value according to the first ratio value and the difference value.
5. The preparation method for a monocrystalline silicon wafer of claim 2 or 3, comprising: determining the second ratio value as well as the difference value between the first ratio value and the second ratio value first, and then determining the first ratio value according to the second ratio value and the difference value.
6. The preparation method for a monocrystalline silicon wafer of claim1, wherein cutting off the two ends of a monocrystalline silicon rod is to respectively cut off a length of 5-100mm from the edges of the two ends of the monocrystalline silicon rod along the axial direction.
7. The preparation method for a monocrystalline silicon wafer of claim 1, wherein the

width (b) of the strip-shaped right-angle monocrystalline silicon wafer is 12.5-200mm.

8. The preparation method for a monocrystalline silicon wafer of claim 1, wherein the thickness of the strip-shaped right-angle monocrystalline silicon wafer is 50-220um.