Claims

1. An elongated electrical conductor (2) having a longitudinal axis (A) essentially parallel to the rolling direction of a conductor wire, which conductor (2) comprises of copper material, an attachment surface (7) configured to be attached to a receiving surface of a silicon wafer (3) to establish an electrical connection between the silicon wafer (3) and the electrical conductor (2), characterized in that the copper material is present at a purity of at least 99.5%, and wherein the grains have a cubic texture comprising a set of cubic axes directed within an up to 20 degree angular range to the longitudinal axis (A), and whereby at least 65% of the grains have said cubic texture.

2. The electrical conductor (2) according to claim 1, characterized in that the copper material has a purity of at least 99.9%.

3. The electrical conductor (2) according to claims 1 or 2, characterized in that 70 to 100% of the grains have the cubic texture.

4. The electrical conductor (2) according to any one of claims 1 to 3, characterized in that the set of cubic axes are directed within a 15 degree angular range to the longitudinal axis (A).

5. The electrical conductor (2) according to any one of claims 1 to 3, characterized in that the set of cubic axes are directed within a 10 degree angular range to the longitudinal axis (A).

6. The electrical conductor (2) according to any one of claims 1 or 5, characterized in that the cube axis index is at least 70%.

7. The electrical conductor (2) according to any one of claims 1 or 6, characterized in that the copper material is an Electrolytic Tough Pitch copper or an Oxygen-Free copper.

8. The electrical conductor (2) according to any one of claims 1 or 7, characterized in that the copper material has a yield stress below 50 MPa.

9. The electrical conductor (2) according to any one of claims 1 or 8, characterized in that the copper material has a Young modulus below 95 GPa.

~~10. A process for the manufacturing of an electrical conductor (2), comprising a copper material at a purity of at least 99.5%, characterized in that the process comprises the steps of:~~
~~a) arranging the copper material to a rolling mill,~~
~~b) rolling the copper material along a rolling direction to a reduction from 20 to 80%, wherein a copper product is formed,~~
~~c) annealing the copper product at a temperature below 600°C,~~
~~d) optionally repeating the steps b) and c),~~
~~e) cold rolling the copper product to a reduction of at least 80%, and~~
~~f) final annealing of the copper product at a temperature above 250°C.~~

~~11. The process according to claim 10, characterized in that the copper material has a purity of at least 99.9%.~~

~~12. The process according to claims 10 and 11, characterized in that the grain size after steps b) and c) is 5 to 25 µm.~~

~~13. The process according to any one of claims 10 or 12, characterized in that the copper material is an Electrolytic Tough Pitch copper or an Oxygen-Free copper.~~

~~14. The process according to any one of claims 10 or 13, characterized in that the reduction in step b) is from 30 to 80%.~~

~~15. The process according to any one of claims 10 or 14, characterized in that the temperature in step c) is from 300 to 400°C.~~

~~16. The process according to any one of claims 10 or 15, characterized in that the reduction in step d) is from 90 to 99%.~~

~~17. The process according to any one of claims 10 or 16, characterized in that the temperature in step f) is above 500°C.~~

~~18. An electrical conductor (2) manufactured by the process according to any one of claims 10 to 17.~~

1~~0~~9. The electrical conductor (2) according to any one of claims 1 to 9 ~~or 18~~, characterized in that the attachment surface (7) is coated with tin based solder material (6).

11~~20~~. A process for attaching the electrical conductor (2) according to claim ~~19~~ 10 to a silicon wafer (3), characterized in that the attachment surface (7) of the electrical conductor (2) and the receiving surface of the silicon wafer (3) are heated to melt the solder material (6), whereby an attachment is formed between the electrical conductor (2) and the silicon wafer (3) upon cooling of the heated material.

12~~21~~. A photovoltaic module (1) comprising at least one silicon wafer (3) attached to at least one electrical conductor (2) according to claim 10~~19~~.