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1.

[Claim 1]

A dental implant comprising:

a jawbone embedded portion compatible with a jawbone; and

a gum contact portion that is continuous with the jawbone embedded portion, and that is to be inserted into a gum;

wherein the gum contact portion has a region to be in contact with the gum, the region being coated with a cell adhesive layer containing polypeptide or protein so as not to impair the compatibility of the jawbone embedded portion with the jawbone.

[Claim 2]

The dental implant according to claim 1, wherein the outer surface of the cell adhesive layer has an arithmetic average roughness Ra of 2  $\mu\text{m}$  or less.

[Claim 3]

The dental implant according to claim 1 or 2, wherein the outer surface of the jawbone embedded portion to be in contact with the jawbone is coated with an apatite layer or subjected to alkali heat treatment.

2.

Background Art

[0006]

Conventional electric double-layer capacitors have a problem in that their capacity does not increase even by increasing the negative electrode capacity because the positive electrode capacity is low. Specifically, if a positive electrode collector using aluminum foil is thickly coated with activated carbon in order to increase the capacity, the usage rate decreases, and peeling occurs, thereby failing to increase

the capacity. Accordingly, the positive electrode capacity is lower than that of the carbon-based negative electrode, which can intercalate Li ions, and the cell energy density cannot be increased.

[0007]

Moreover, because the potential of activated carbon is 3 V (vs Li/Li<sup>+</sup>), the cell voltage can be increased only to about 2.5 V, due to the withstand voltage of the electrolyte. Therefore, the voltage is low, causing problems of low energy density and low power density.

3.

For efficient oxidation treatment, it is preferable that after copper refining slag is inserted into a slag treatment furnace, fuel gas, such as natural gas and/or propane gas, and oxygen gas are mixed to form a gas jet, and that this mixed gas jet is blown into the slag using a lance. In this case, when the mixed gas jet is blown at a mixing rate of excess oxygen relative to the gas composition having a perfect combustion ratio, very high-temperature oxygen gas can be supplied into the slag. For example, the temperature of combustion gas generated by combustion of natural gas and oxygen gas at a perfect combustion ratio is about 2400°C. Therefore, when this mixed gas is put in an excess oxygen state, high-temperature oxygen gas at around 2000°C can be obtained. As a result of this treatment, the slag temperature increases, and the sulfide is almost completely converted into an oxide.

4.

(Surface Energy of Imprint Mold)

First, the contact angle was measured using a "CA-S 150" contact angle meter (produced by Kyowa Interface Science Co., Ltd.). Specifically, the imprint mold was fixed on a horizontal measuring stand, and liquid drops (diameter: 2 mm or less) of

a polar solvent and a non-polar solvent were each dropped using a liquid drop regulator on a flat portion of the surface of the surface layer of the imprint mold onto which a master micropattern was not transferred. The polar solvent used was ion exchanged water, and the non-polar solvent used was n-decane. Next, an angle  $\theta$  was read. The angle  $\theta$  was an angle made by the surface of the surface layer and a straight line connecting the peak of the dropped liquid drop with a contact between the surface of the surface layer and the edge of the liquid drop located on the leftmost side (or the rightmost side) when the liquid drop was viewed along the surface of the surface layer. The angle  $\theta$  was measured a total of 5 times, and their average value was used as the contact angle. Then, the surface (free) energy was calculated by Fowkes' equation and Young's equation using this contact angle.