

strength for an orthodontic resin adhered to the resulting crystal growth was 44 kg/cm².

SUMMARY OF DISCLOSURE

In summary of this disclosure, the present invention provides a new method of bonding to teeth and other calcified tissues which is a substantial improvement over the conventional acid-etch technique. Modifications are possible within the scope of this invention.

What we claim is:

1. In a method of bonding materials to calcified tissues including human teeth, the improvement which comprises the sequential operation of initially forming a crystal growth of gypsum crystals having a length of about 10 to about 25 micrometers and a thickness of about 2 to about 5 micrometers adhered to and nucleated within a surface of said tissues, and subsequently interlocking said bonding with said crystal growth and said tissues.

2. A method of treating calcified tissues, which comprises:

contacting a surface of said tissue with a treatment agent for a time sufficient to form insoluble gypsum in crystalline form on the surface, and

subsequently removing spent treatment agent from the surface while leaving said crystalline salt adhered to the surface.

3. The method of claim 2 wherein said treatment agent comprises an aqueous solution of substantially non-flowing viscosity in which ionic species are dissolved capable of forming said crystalline salt, whereby said solution may be confined to a specific region of said surface, and said removal of said spent treatment agent is effected by washing spent solution from said surface after said crystalline salt is formed.

4. The method of claim 3 wherein said calcified tissue is human teeth.

5. The method of claim 4 wherein said solution additionally contains fluoride ions.

6. A method of treating calcified tissue, which comprises:

contacting a surface of said tissue with a treatment agent capable of forming gypsum crystals having a length of about 10 to about 25 micrometers and a thickness of about 2 to about 5 micrometers attached to and nucleated within the surface for a time sufficient to form said crystals, and subsequently removing spent treatment agent from said surface to leave said crystals adhered to said surface.

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