

## **Engineering particle size distributions for enhanced glass infiltration in porous ceramic preforms for dental crowns and bridges**

### **Abstract:**

The present invention relates to the processing of dental ceramic crowns and bridges which are to be placed in a patients' oral cavity to replace damaged or missing teeth. To prepare the framework structure of dental crown or bridge, ceramic powder blends are infiltrated with glass. The process involves fabrication of porous ceramic preforms using engineered particle size distribution. The particle size distributions result in a characteristic pore size distribution which facilitates infiltration of glass in the presintered porous bodies in shortest possible time. Thereby getting a dental ceramic product with enhanced fracture toughness and strength.

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