Special Issue

Nano Particles and Fiber Reinforced Materials in Dentistry

Message from the Guest Editors

Nanoscience offers new possibilities for dental materials. Nanofillers with different size and shape are commonly used as dental restoratives. Fiber reinforced materials based on carbon, polyaramid, polyethylene, and glass have been largely studied and, more recently, glass fibers of various compositions are more commonly applied as restorative and prosthetic materials. These materials have been investigated with a particular focus on fracture strength, fatigue resistance, load-bearing capacity, flexural strength, compressive strength, bonding adhesion, layer thickness, bacterial adhesion, and clinical reliability. With the introduction of new technologies, adhesion protocols, resin matrices, fibers, nanofillers, and application techniques, the reinforced-material field need further understanding. In the light of the above, any progress in design, manufacturing, testing and clinical application is of great importance for further expansion of micro- and nano- filled polymers and fiber-reinforced composites for dental purposes.

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