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Sommario/riassunto	Billions of people suffer from dental problems. Paradoxically, the deteriorating state of teeth is accompanied by the ever-increasing desire to preserve the best facial appearance, which is significantly influenced by teeth aesthetics. This favors the development of dental materials and manufacturing technologies for dental prosthetics, needed to achieve expected effects of clinical treatment. This reprint focus on enhancing antimicrobial and mechanical properties of polymeric materials and composites for dentistry. In recent years, special attention has been focused on the possibility of giving materials new or improved properties by the introduction of nano or submicron size additives, fibers or whiskers. Using agents such as natural oils to enhance antimicrobial properties remains an exciting idea. Another area of research is the application of antibacterial monomers, which can be copolymerized in resins to kill oral pathogenic microflora. The use of new monomers or new compilations of various monomers to improve mechanical properties has also aroused interest. In addition, we are currently looking for new data regarding colonization of dental materials by pathogenic microbes and their influence on the other properties. Further, there are many new commercially available materials which should be investigated to verify their properties, which is important from the point of view of clinical practice. Original new

research and reviews related to any of the topics mentioned above indicate the current directions of development of dental materials. We hope that the presented work will be of interest to readers.