

BOOK REVIEWS

Orthodontic Materials: Scientific and Clinical Aspects

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The science of dental materials is included in all dental school curricula, but is usually taught only at the predoctoral level. Although this subject, formerly termed “*materia technica*”, is intricately involved in the

clinical practice of orthodontics, few specialty-training programs include formal courses devoted entirely to the subject of orthodontic materials. Particular areas of materials science that are pertinent to orthodontics, such as wire metallurgy and adhesive resin chemistry, have been relegated to lectures as a part of the biomechanics curriculum. It is not that orthodontic program directors view such information as trivial; it is simply that teaching resources for a formal course in orthodontic biomaterials have, until now, been nonexistent. The current text makes such a resource readily available.

Sixteen authors, including the editors, have contributed to this impressive book. A broad range of topics is presented, ranging from the arcane (interatomic bonding and atomic arrangement) to the eminently practical (orthodontic wires and impression materials).

The authors are adept at bridging the gap between basic scientific theory and the clinical application of their subjects.

While not skimping on theoretical detail, they present the material in such a manner that those of us who struggled through Chem 101 more than a couple of decades ago can readily recall these concepts and apply them on a day-to-day, clinical basis.

Abundant high-quality illustrations make the more esoteric concepts of the book much easier to understand and, in all honesty, much more interesting. I don't remember ever wondering what the energy-dispersive x-ray fluorescence spectrum of a nickel titanium archwire looks like, but it certainly intrigued me when I saw it here.

This text is obviously aimed at a formal postgraduate course given in a university setting and, in fact, has already been adopted by a number of the graduate programs around the country. Still, any private practitioner with an interest in engineering, chemistry, or orthodontic materials in general would not only benefit from the book, but would enjoy just flipping through it. RGK