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AUDIENCE

Researchers in academia and industry relating to dentistry and materials science: postgraduates, undergraduates, teachers, technicians, clinicians, manufacturers and others. Those concerned with the wider field of biomedical materials will also find much of interest and relevance.



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Materials Science for Dentistry, 10e

B W Darvell Hon. Professor, Dental Materials Science, University of Birmingham, UK; formerly of Kuwait University, Kuwait, and The University of Hong Kong, Hong Kong



This comprehensive new edition is an essential resource for researchers and students of dental materials science.

A volume in the Woodhead Publishing Series in Biomaterials.

KEY FEATURES

- The most comprehensive and detailed book on dental materials science, ever.
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- Contains new chapters on chemistry and equipment.
- Developed in the lab and classroom by an experienced international expert, with feedback and input from practicing scientists, clinicians, instructors and students.

DESCRIPTION

Materials Science for Dentistry, Tenth Edition, is a standard resource for undergraduate and postgraduate courses in dentistry. It provides a fundamental coverage of the materials and processes on which dentistry depends, covering those aspects of structure, chemistry and physics which govern the behaviour and performance of materials in use. Particular classes of materials discussed include gypsum, polymers, cements, waxes, ceramics and metals. Other chapters review topics such as surfaces, corrosion, mixing, casting, cutting and bonding as well as mechanical testing. This updated edition, which includes a substantial new chapter on chemistry (including oxidising agents and endodontic irrigants), has been extensively revised with much new material, for example on temporary restoration resins, fibre reinforcement, fluid mechanics and practical aspects of wetting surfaces.

Written to provide explanations of behaviour, formulation, and properties, as well as of clinical and laboratory instructions and procedures, there is no comparable single source available. Assembled and developed over more than 35 years, and on the basis that there should be no assertion without scientific justification – there are many primary literature references, the content will be as valid on the last day of practice as the first. This new edition is an authoritative and valuable resource for researchers, students, teachers and practitioners in the wide field of dentistry.

About the Author

Dr. Brian W. Darvell was formerly Professor and Chairman of the Department of Bioclinical Sciences in the Faculty of Dentistry at Kuwait University. Prior to this he spent nearly 30 years in the Department of Dental Materials Science in the Faculty of Dentistry at The University of Hong Kong. Dr. Darvell, a Chartered Scientist and Chartered Chemist, is still active in the field, holding honorary professorships at both the University of Birmingham (UK) and The University of Hong Kong, and is a fellow of the Royal Society of Chemistry, the Institute of Materials, Minerals and Mining (IOM3), the Royal Statistical Society and the Academy of Dental Materials. He serves on the Editorial Board of the journal *Dental Materials*.

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