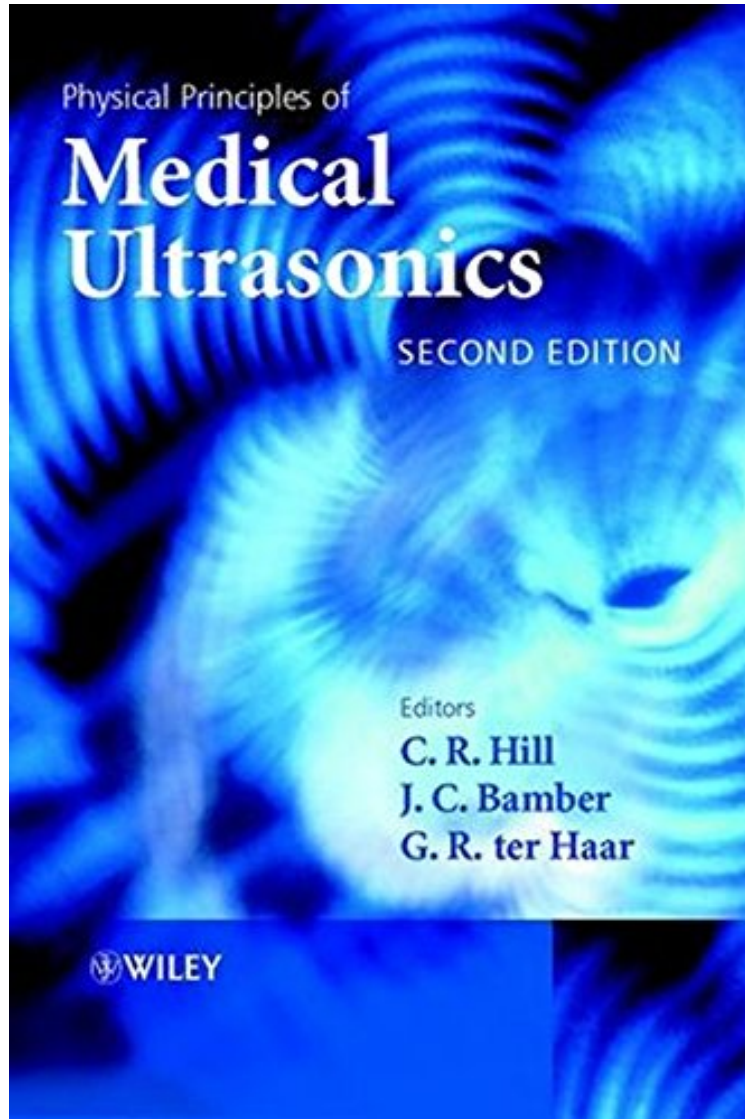


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From C R Hill : Physical Principles of Medical Ultrasonics before purchasing it in order to gage whether or not it would be worth my time, and all praised Physical Principles of Medical Ultrasonics:

The physical properties of ultrasound, particularly its highly directional beam behaviour, and its complex interactions with human tissues, have led to its becoming a vitally important tool in both investigative and interventional medicine, and one that still has much exciting potential. This new edition of a well-received book treats the phenomenon of

ultrasound in the context of medical and biological applications, systematically discussing fundamental physical principles and concepts. Rather than focusing on earlier treatments, based largely on the simplifications of geometrical acoustics, this book examines concepts of wave acoustics, introducing them in the very first chapter. Practical implications of these concepts are explored, first the generation and nature of acoustic fields, and then their formal descriptions and measurement. Real tissues attenuate and scatter ultrasound in ways that have interesting relationships to their physical chemistry, and the book includes coverage of these topics. Physical Principles of Medical Ultrasonics also includes critical accounts and discussions of the wide variety of diagnostic and investigative applications of ultrasound that are now becoming available in medicine and biology. The book also encompasses the biophysics of ultrasound, its practical applications to therapeutic and surgical objectives, and its implications in questions of hazards to both patient and operator.

"an excellent reference, providing a starting point and more for the many avenues of interest in this rich and important topic." (Medical Physics, December 2004) "This book can be an excellent textbook for a graduate course in medical ultrasonics and a valuable desk reference for researchers in the field." (IEEE Engineering in Medicine and Biology, July/ August 2004) This is an excellent update to the first edition of this book and should form a standard reference for many years to come. (Ultrasound in Medicine Biology, Vol.30, No.5, 2004) I know of no other book that treats this subject with comparable breadth and depth. (Journal of the Acoustical Society of America, November 2004) From the Back Cover The physical properties of ultrasound, particularly its highly directional beam behaviour, and its complex interactions with human tissues, have led to its becoming a vitally important tool in both investigative and interventional medicine, and one that still has much exciting potential. This new edition of a well-received book treats the phenomenon of ultrasound in the context of medical and biological applications, systematically discussing fundamental physical principles and concepts. Rather than focusing on earlier treatments, based largely on the simplifications of geometrical acoustics, Physical Principles of Medical Ultrasonics examines concepts of wave acoustics, introducing them in the very first chapter. Practical implications of these concepts are explored, first the generation and nature of acoustic fields, and then their formal descriptions and measurement. Real tissues attenuate and scatter ultrasound in ways that have interesting relationships to their physical chemistry, and the book includes coverage of these topics. Physical Principles of Medical Ultrasonics also includes critical accounts and discussions of the wide variety of diagnostic and investigative applications of ultrasound that are now becoming available in medicine and biology. Lastly, the book encompasses the biophysics of ultrasound, its practical applications to therapeutic and surgical objectives, and its implications in questions of hazards to both patient and operator. Thoroughly revised, this new edition of Physical Principles of Medical Ultrasonics will be of interest to research professionals, operators, academics and trainees in physics, applied physics, electrical engineering and bioengineering.