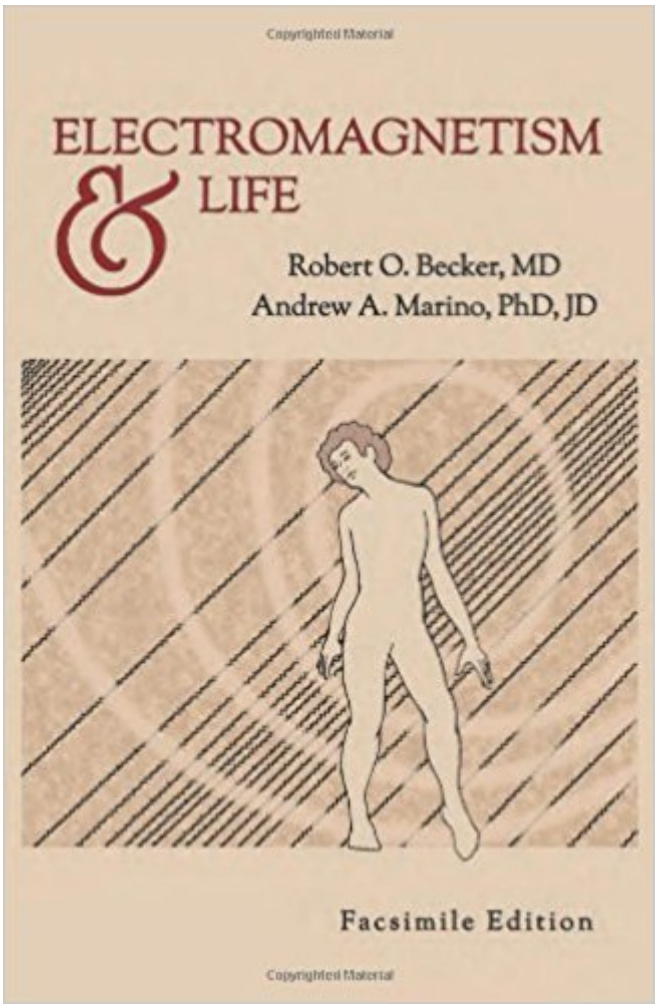
Electromagnetism And Life



Synopsis

The environment is now thoroughly polluted by man-made sources of electromagnetic radiation with frequencies and magnitudes never before present. Man?s activities have probably changed the earth?s electromagnetic background to a greater degree than they have changed any other natural physical attribute of the earth. The evidence now indicates that the present abnormal electromagnetic environment constitutes a significant health risk. There are also positive aspects of the relationship between electromagnetism and life. Clinical uses of electromagnetic energy are increasing and promise to expand into important areas in the near future. This book synthesizes the various aspects of the role of electricity in biology.

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Customer Reviews

Becker and Marino present a comprehensive review of the influence of electromagnetic fields (EMFs) on living systems. beginning with an overview of the scientific and political history of bioelectrical phenomena, they go on to discuss what is known about intrinsic and natural EMFs, and the effects of man-made EMFs on the nervous, endocrine, cardiovascular, hematological, immune and reproductive systems. The authors, well known for their work on regeneration, develop the hypothesis that intrinsic EMFs control biological functions, while natural EMFs convey information to living organisms. Article fields, meanwhile, act as stressors -- stimuli that elicit a common physiological, adaptive response. In this well-referenced book, Becker and Marino contend that "the present abnormal electromagnetic environment can constitute a health risk." --Microwave News, June, 1982This book synthesizes the various aspects of the role of electricity in biology and

emphasizes their underlying unity. It is organized in four parts. The first two parts deal with historical factors and the bio-regulatory role of electromagnetic energy. The other two parts deal with bioeffects of artificial electromagnetic energy. The most apparent effects of electricity viz, heat and shock are not included in this monograph. Nonetheless the monograph is addressed to a broad range of readers who would be stimulated to do further evaluation and research. --Medical Book News - A Guide to New Books, May, 1983This book represents the authors' provocative insights from decades of research into bioelectric effects. It begins with a historical but lively account of past research seeking to discover the vital animal or electrical forces distinguishing the living from the nonliving. Galvani's erroneous conclusions regarding animal electricity in 1786 were opportunistically diverted by Volta and others from the biologic realm into the technology of generating electricity. The discovery of voltaic electricity led to the battery-operated telegraph, the arc light, and, ultimately, to the major dominance of electricity in today's society. The difficult questions pertaining to electricity's role in complex living forms remained unanswered. Biochemical explanations of biologic control systems dominated. Any suggestion of electrical control systems within the body was promptly equated with "vital force" research and dismissed as unscientific. Current concepts of electrobiologic controls owe more to developments in solid state physics than to biologic research. Body functions for which the authors describe electromagnetic influences include neuronal activity, growth, healing, and even possibly regeneration of parts. The beneficial aspects of these findings have already been exploited clinically to treat healing problems in the skeletal system. The feasibility of biasing DC flow in the CNS to induce anesthesia or to control pain ahs also been demonstrated. Unfortunately, there are also potentially detrimental effects to consider, particularly from exposure to intense electromagnetic fields produced in today's society. The authors define such exposure as a general biologic stressor. Its significance is difficult to contest or to support, since any such stress would be an unsensed one. This question cries for better epidemiologic measurements. Unfortunately, the authors opt mainly for risk evaluations and regulations based on animal testing. This should distress most of us readers who already sense an overenthusiastic application of animal toxicology to control human affairs. It should not, however, detract seriously from the overall impact of this important book for scientists, engineers, physicians, students, and the general public. This book does indeed provide "a guide to be used [cautiously] at the beginning of an interesting journey." --Journal of the American Medical Association, August 6, 1982Part Four describes environmental electromagnetic energy, consisting mainly of powerline frequencies and radio and television signals. Results of epidemiological studies are given for a variety of exposure levels and frequencies. The last chapter is a brief description of therapeutic

application of electromagnetic energy in osteogenesis and acupuncture. Most topics in this book are introduced with brief descriptions of basic concepts. Considering the amount of material covered in the book, this brevity, which also is seen in some of the main subject matter, keeps the length of the book reasonable. However, this brevity also results in the book being best understood by a reader with a background in physiology or biophysics. The book is written in a concise, organized manner that makes for uncluttered reading (somewhat marred by a number of typographical errors). At least in part, the conciseness is because there are fewer literature references than what a comprehensive treatise would have required; the reader should weigh the presented material accordingly. It also should be noted that the authors reference Soviet literature extensively and sometimes exclusively. In some cases, this is understandable since some of the Soviet studies are unique; in other cases, reference to more works would make a more balanced presentation. The serious researcher also should consult recent, related books and the current scientific literature. Although the controversy over the general topic of this book is acknowledged in the preface, the reader who doesn't read the preface would not realize a controversy existed since little of the other side is given in the rest of the book. However, by bringing together the evidence for the "subthermal" effects of electromagnetic energy on biological systems, Becker and Marino have succeeded in their goal to provide a guide to the subject. The material must serve as an introduction since the overall meaning of the data presented is not brought into focus; this may be because it cannot be focused now. The evidence presented by the authors shows little in common among biological effects except that they seem to occur. Many readers will disagree with the authors' concepts and conclusions about interactions of the electromagnetic environment with biological systems. However, these disagreements may form the basis for their own resolution through future, well-designed experiments using the results of studies reviewed in this book. --IEEE Engineering in Medicine and Biology, December, 1982

Andrew Marino is a biophysicist and attorney with a special interest in the scientific and societal implications of the ubiquitous presence of electromagnetic energy in the environmental and workplace environments. He has co-authored several hundred publications in the area over the last forty years. He is married and the father of four children.

Tells a pretty good story of Rife and his life. A good case of where there's smoke there's fire....I have no doubt that he was onto lifechanging technology. To wit, read about the Nobel Prize for Medicine and Physiology 2014...Rife is conveniently omitted from any reference to these kind of microscopes. A good and thought provoking read.

Great book. Knowledge of our selves and what makes us work.

Good book.

This book was not quite what I expected. A large portion of it was spent discussing the history of electrical discoveries and not enough spent on potential risks in current utilization patterns.

This is Important book on the nature of life to electromagnetism.

The Body Electric: Electromagnetism And The Foundation Of Life Electromagnetism and Life PROBLEMS AND SOLUTIONS ON ELECTROMAGNETISM (Major American Universities PH.D. Qualifying Questions and S) Electromagnetismo (Electromagnetism) (Spanish Version) (Grade 3) (Science Readers: Content and Literacy) (Spanish Edition) Fundamentals of Physics II: Electromagnetism, Optics, and Quantum Mechanics (The Open Yale Courses Series) Fundamentals of Physics II: Electromagnetism, Optics, and Quantum Mechanics: 2 (The Open Yale Courses Series) The Feynman Lectures on Physics, Vol. II: The New Millennium Edition: Mainly Electromagnetism and Matter: Volume 2 (Feynman Lectures on Physics (Paperback)) The Feynman Lectures on Physics, Vol. II: The New Millennium Edition: Mainly Electromagnetism and Matter (Feynman Lectures on Physics (Paperback)) (Volume 2) Beginning Physics II: Waves, Electromagnetism, Optics and Modern Physics The Feynman Lectures on Physics: Mainly Electromagnetism and Matter ,Volume 2 Fundamentals of Electromagnetism: Vacuum Electrodynamics, Media, and Relativity Advanced Electromagnetism and Vacuum Phy (Contemporary Chemical Physics) Electromagnetism, And How It Works (Scientific American) Magnets and Electromagnetism (Physical Science in Depth) What Is Electromagnetism? (Understanding Electricity (Crabtree)) Applied Electromagnetism (Pws Engineering Foundation) Electromagnetism (Dover Books on Physics) Life Coaching: Life Coaching Blueprint: Save a Life One Person at a Time (Bonus 30 Minute Life Coaching Session - How to Motivate, Inspire, Change Your Life) Life Coaching: Life Coaching Blueprint: Save A Life One Person At A Time (BONUS 30MINUTE Life Coaching Session- How To Motivate, Inspire, Change Your Life) Life Coaching: Complete Blueprint to Becoming a Powerful Influential Life Coach (Life coaching, Life improvement, positive thinking, coaching, better leadership, goals, consulting)