



[EPUB] Radiation Biophysics

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Radiation Biophysics-Edward L. Alpen 1997-10-22 This newly revised and updated edition of Radiation Biophysics provides an in-depth description of the physics and chemistry of radiation and its effects on biological systems. Coverage begins with fundamental concepts of the physics of radiation and radioactivity, then progresses through the chemistry and biology of the interaction of radiation with living systems. The Second Edition of this highly praised text includes major revisions which reflect the rapid advances in the field. New material covers recent developments in the fields of carcinogenesis, DNA repair, molecular genetics, and the molecular biology of oncogenes and tumor suppressor genes. The book also includes extensive discussion of the practical impact of radiation on everyday life. Covers the fundamentals of radiation physics in a manner that is understandable to students and professionals with a limited physics background Includes problem sets and exercises to aid both teachers and students Discusses radioactivity, internally deposited radionuclides, and dosimetry Analyzes the risks for occupational and non-occupational workers exposed to radiation sources

Radiation Biophysics-Howard Lucius Andrews 1961

Radiation Biophysics (ionizing Radiations)-Игорь Борисович Кудряшов 2008 The book is concerned with features analysis of

radiation damage to living matter at different levels of its organisation, beginning from the molecular level. The general theory of the mechanisms of biological action of radiation based on four logically connected principles of radiation biology is presented for the first time. The book contains abundant material on primary and secondary processes of the response of living systems to radiation, the mechanisms of direct and indirect action of radiation through radiolysis of water and lipids; a detailed consideration of the theory of targets (DNA and biological membranes) and the problems of high- and low-dose irradiation in the context of present-day. The systemic response of the cell to irradiation (oxidative stress, endogenous background radioresistance, damage and repair of biological membranes and DNA, systemic protection against radiation) is approximated. Presentation of these important problems is preceded by an up-to-date evaluation of some aspects regarding dosimetry of ionising radiation.

Biophysics-W. Hoppe 2012-12-06 What is biophysics? As with all subjects which straddle traditional boundaries between fields, it eludes a precise definition. Furthermore, it is impossible to do biophysics without having a certain foundation of knowledge in biology, physics, physical chemistry, chemistry and biochemistry. One approach to a biophysics textbook would be to refer the student to the literature of these neighboring fields, and to leave the selection of the appropriate supplementary material up to the student. The editors of this volume are of the opinion that it is more useful and less time-consuming to present a selection of the supplementary knowledge, in concentrated form, together with the subject matter specific

to biophysics. The reader will thus find in this book introductions to such subjects as the structure and function of the cell, the chemical structure of biogenic macromolecules, and even theoretical chemistry. What, indeed, is biophysics? Must we consider it to include physiology, electromedicine, radiation medicine, etc. ? The field has evolved continuously in recent years. Molecular understanding of life processes has come more and more to the fore. Just as the field of molecular physics has developed to describe structures and processes in the realm of non-living systems, there has been a corresponding development of molecular biophysics.

Biophysical Aspects of Radiation Quality-International Atomic Energy Agency 1971

Biophysics Problems-Péter Maróti 1998 This textbook presents more than 200 current problems from modern biophysics and related fields of application, together with detailed solutions. The topics covered in the 11 chapters of this book follow the sequence of dimensions and diversity of the living world. The reader is faced with the great challenge of finding solutions to problems, but at the same time his or her knowledge of important concepts and relations are reinforced. The treatment of the problems is straightforward and well-documented.

First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Radiation biophysics, free radicals-Engelbert Broda 1971

Biophysical Theory of Radiation Action-Klaus Günther 1983

Biophysical Modelling of Radiation Effects, Proceedings of the Workshop on Biophysical Modelling of Radiation Effects, Padua, Italy, 2-5 September 1991-Commission of the European Communities 1992-03-26 Over the past 15 years, there has been progressive development

of a series of biophysical models for the analysis and interpretation of the cellular effects of ionizing radiation. The theme of the workshop was the development of accurate models of the interaction of radiation with tissue and the origins of carcinogenesis - probably the most important issue in the field of radiation protection, since analyses of this kind are the only alternative to epidemiological studies. This volume concentrates on physical models and data analysis, and provides the reader with indications of critical benchmark experiments which need to be included in future research. This book will be of interest to radiation biophysicists and biologists, medical physicists and anyone involved in radiological therapy and protection, as a valuable library addition reviewing all aspects of biophysical radiation effect modelling.

First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Radiation biophysics, free radicals- 1971

Proceedings of the First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Radiation biophysics, free radicals- 1971

Radiation Histopathology-George W. Casarett 2019-07-17 First Published in 1980, this book offers comprehensive insight into the ways in which radiation changes diseased tissue. Carefully compiled and filled with a vast repertoire of notes, diagrams, and references this book serves as a useful reference for students of medicine and other practitioners in their respective fields.

Annual Catalogue of the University of Kansas-University of Kansas 1963

European Biophysics Congress, 1st, Baden, Austria, 1971: Proteins, nucleotides- 1972

First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Membranes, transport- 1971

First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Proteins, nucleotides; structure, function, biosynthesis-Engelbert Broda 1971

First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Cells, organs; including nervous, sensory and contractile systems-Engelbert Broda 1971

Proceedings of the First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Proteins, nucleotides; structure, function, biosynthesis- 1971

Proceedings of the First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Cells, organs; including nervous, sensory and contractile systems- 1971

Clinical Biophysics-Michael Anbar 1985

First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Photosynthesis, bioenergetics, regulation, origin of life-Engelbert Broda 1971

Radiation Protection in Medical Physics-Yves Lemoigne 2011-04-14 This book introduces the fundamental aspects of Radiation Protection in Medical Physics and covers three main themes: General Radiation Protection

Principles; Radiobiology Principles; Radiation Protection in Hospital Medical Physics. Each of these topics is developed by analysing the underlying physics principles and their implementation, quality and safety aspects, clinical performance and recent advances in the field. Some issues specific to the individual techniques are also treated, e.g. calculation of patient dose as well as that of workers in hospital, optimisation of equipment used, shielding design of radiation facilities, radiation in oncology such as use of brachytherapy in gynecology or interventional procedures. All topics are presented with didactical language and style, making this book an appropriate reference for students and professionals seeking a comprehensive introduction to the field as well as a reliable overview of the most recent developments.

Physics for the Biological Sciences : a Topical Approach to Biophysical Concepts-Frederick Ross Hallett 1992

Biophysics of Membrane Transport- 1992

Proceedings of the First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Theoretical molecular biology, biomechanics, biomathematics, environmental biophysics, techniques, education- 1971

Physical Mechanisms in Radiation Biology-Raymond D. Cooper 1974

Radiotherapy Treatment Planning-J. Donald Chapman 2016-04-21 Understand Quantitative Radiobiology from a Radiation Biophysics Perspective In the field of radiobiology, the linear-quadratic (LQ) equation has become the standard for defining radiation-induced cell killing. Radiotherapy Treatment Planning: Linear-Quadratic Radiobiology describes tumor cell inactivation from a radiation physics perspective and offers appropriate LQ parameters for modeling tumor and normal tissue

responses. Explore the Latest Cell Killing Numbers for Defining Iso-Effective Cancer Treatments The book compiles radiation mechanism information from biophysical publications of the past 50 years, addressing how ionizing radiation produces the killing of stem cells in human tumors. It presents several physical and chemical parameters that can modulate the radiation response of clonogenic cells in tumors. The authors describe the use of the LQ model in basic radiation mechanism studies with cells of relatively homogeneous radiation response and then extend the model to the fitting of survival data generated with heterogeneous cell populations (tumors). They briefly discuss how to use the LQ model for predicting tumor (local) control probability (TCP) and normal tissue complication probability (NTCP). The book also examines potential molecular targets related to alpha- and beta-inactivation and gives suggestions for further molecular characterizations of these two independent processes. Develop Efficacious, Patient-Friendly Treatments at Reduced Costs Focusing on quantitative radiobiology in LQ formulation, this book assists medical physicists and radiation oncologists in identifying improved cancer treatments. It also encourages investigators to translate potentially improved radiotherapy schedules based on TCP and NTCP modeling into actual patient benefit.

Fundamentals and Data in Radiobiology, Radiation Biophysics, Dosimetry and Medical Radiological Protection-A. Kaul 2012 The volume 'Medical Radiological Physics' is intended to provide the scientific basis of diagnostics and therapy in medical radiology. The present Subvolume A reviews radiation (both ionising and non-ionising) and its biological effects, dosimetry in diagnostic radiology and radiotherapy, as well as in nuclear medical diagnostics and therapy, and, finally, medical radiological protection relevant for patients, personnel and the general public. Not only fundamentals but also basic data pertinent to the topics dealt with have been collected by numerous experts of great international renown.

Proceedings of the ... National Biophysics Conference-National Biophysics Conference 1959

Biophysics- 1980

Radiation and Health-Thormod Henriksen 2002-09-05 Radiation and the effects of radioactivity have been known for more than 100 years. International research spanning this period has yielded a great deal of information about radiation and its biological effects and this activity has resulted in the discovery of many applications in medicine and industry including cancer therapy, medical diagnostics

First European Biophysics Congress, 14-17 Sept. 1971, Baden Near Vienna, Austria: Cells, organs; including nervous, sensory and contractile systems- 1971

University Record ...-University of Florida 1966 This publication includes the following: Annual catalogs and announcements. Announcements of the various colleges, of the extension division, of the Summer school; Commencement exercises; Circulars of the Office of inspector of Nursery stock; Farmers' institute bulletins; Proceedings of the annual High school conference; Catalogs of the Alumni Association; Occasional addresses; student theses and separate studies particularly on some phase of education.

Handbook of Radiobiology-Thayalan Kuppusamy 2016-11-30 Complete guide to radiobiology for postgraduate students. Covers beneficial damage to cancer cells and adverse effects on normal cells. Logical, easy to understand format.

INIS Atomindex- 1986

Who's who in Technology Today- 1980

Activity Report of Synchrotron Radiation Laboratory-Tōkyō Daigaku.
Kidō Hōsha Bussei Kenkyū Shisetsu 1982

Radiation Protection Enrollments and Degrees, 1975-Oak Ridge
Associated Universities. Manpower Development Division 1976

Special Study-Science Council of Canada 1967

Physics in Canada-Canadian Association of Physicists 1967