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KEY=PAPER - MCLEAN POWELL

Field Book for Describing and Sampling Soils

Sirtuins in Biology and Disease

Frontiers E-books *Sirtuins comprise a family of NAD⁺-dependent enzymes that have been shown to impact longevity in a number of eukaryotic organisms. Sir2 (Silent Information Regulator 2) was the first sirtuin protein discovered. The discovery that Sir2 requires NAD⁺ for its activity suggested a link between Sir2 activity and the phenomenon of caloric restriction in prolonging longevity. This link was strengthened by the observation that lifespan extension by caloric restriction requires Sir2 protein. Under conditions of caloric restriction, NAD⁺ levels are high, Sir2 is activated, and the rate of aging is decreased. These effects have been replicated in invertebrate organisms, where a close structural and functional homologue of Sir2 was found in *C. elegans* and *Drosophila*. The sirtuin-dependent effects on metabolism and ageing, observed in lower organisms, have ignited intensive investigation of their biological and therapeutic roles in mammals. There are seven known mammalian sirtuins, SIRT1-7, the most studied of which is SIRT1, a close structural and functional homologue of yeast Sir2. Enhancement of organismal longevity and other health-promoting effects of mammalian SIRT1 have frequently been attributed to the regulation of metabolism. A recognized molecular link between metabolism and aging stimulated a firestorm of investigations, aiming to combat metabolic and age-dependent human diseases. It has become clear, however, that the sirtuin family of proteins regulates a diverse repertoire of cellular functions in mammals. Mounting evidence implicating SIRT1 in important clinical*

indications, such as diabetes, cancer, cardiovascular dysfunction and neurodegenerative disease, suggest that modality as attractive therapeutic target. Subsequently, drug discovery and development, targeting sirtuin activation, has been intensified in the recent years. Despite rapid progress and accumulation of new data, the biological roles of other mammalian sirtuins have been less studied and remain poorly understood. There are several important questions that remain to be addressed. What are the functions of sirtuins in different cell types and tissues? Are all sirtuins involved in the regulation of metabolism and aging? What is the functional relationship between different sirtuins? What are the mechanisms of regulation of sirtuin activities? What is the role of sirtuins in disease and therapy? This issue aims to address these and other critical questions, relevant to Research Topic on sirtuin biology and therapeutics. To that end the issue solicits expert opinions of sirtuin research on structural biology, biochemistry, cell biology, animal genetics, pharmacology, medicinal chemistry and drug discovery, and on areas of investigation studying human conditions, like diabetes, cancer, cardio-vascular, and neurodegeneration. Of particular interest are the new methods and assays to study sirtuins in various organisms and developing sirtuin-based therapeutics. Furthermore, we propose to encourage contributors to discuss new concepts and paradigms, and to express their perspectives on the future development of the sirtuin research field. Altogether, we believe this issue provides a unique opportunity for comprehensive and diverse coverage of the topic, and will be of broad interest for the journal's readership.

Biology HL

Study & Revision Guide for the IB Diploma

Peak Study & Revision Guides for the IB Diploma

Encyclopedia of the World's Biomes

Elsevier *Encyclopedia of the World's Biomes* is a unique, five volume reference that provides a global synthesis of biomes, including the latest science. All of the book's chapters follow a common thematic order that spans biodiversity importance, principal anthropogenic stressors and trends, changing climatic conditions, and conservation strategies for maintaining biomes in an increasingly human-dominated world. This work is a one-stop shop that gives users access to up-to-date, informative articles that go deeper in content than any currently available publication. Offers students and researchers a one-stop shop for information currently only available in scattered or non-technical sources Authored and edited by top scientists in the field Concisely written to guide the reader though the topic Includes meaningful illustrations and suggests further reading for those needing more specific information

The International Baccalaureate An Experiment in International Education

London : G. G. Harrap

Nordic Nutrition Recommendations 2012

Integrating nutrition and physical activity

Nordic Council of Ministers *The Nordic countries have collaborated in setting guidelines for dietary composition and recommended intakes of nutrients for several decades through the joint publication of the Nordic Nutrition Recommendations (NNR). This 5th edition, the NNR 2012, gives Dietary Reference Values (DRVs) for nutrients, and compared with earlier editions more emphasis has been put on evaluating the scientific evidence for the role of food and food patterns contributing to the prevention of the major diet-related chronic diseases. Recommendations on physical activity are included and interaction with physical activity has been taken into account for the individual nutrient recommendations wherever appropriate. A chapter on sustainable food consumption has been added. A Nordic perspective has been accounted for in setting the reference values. The NNR 2012 has used an evidence-based and transparent approach in assessing associations between nutrients and foods and certain health outcomes. Systematic reviews form the basis for the recommendations of several nutrients and topics, while a less stringent update has been done for others. The systematic reviews and individual chapters have been peer reviewed and the systematic reviews are published in the Food & Nutrition Research journal. The draft chapters were subject to an open public consultation. Recommendations have been changed only when sufficient scientific evidence has evolved since the 4th edition. The primary aim of the NNR 2012 is to present the scientific background of the recommendations and their application. A secondary aim is for the NNR 2012 to function as a basis for the national recommendations that are adopted by the individual*

The Franciscana Dolphin

On the Edge of Survival

Academic Press *The Franciscana Dolphin: On the Edge of Survival* provides the most updated and comprehensive knowledge on the most endangered marine mammal in the Western South Atlantic Ocean. It synthesizes all available information on this dolphin species, also referred to as La Plata dolphin, ranging from taxonomy, evolution, diet, parasites and diseases, reproduction and growth, to genetic diversity and stock definition, distribution, abundance, behavior, as well as the threats and causes behind the dwindling population numbers. Written by international experts, this book explores aspects of the species' natural history and urgent problems of accidental mortality in fishing nets, contamination and habitat loss. The book provides alternatives to rehabilitate this species and includes proposals for marine protected areas, public policies and international agreements aimed at joint conservation efforts. It is an important resource for researchers and practitioners in marine conservation, marine biology and zoology, particularly those who seek to gain the most reputable information on vulnerable marine mammal species for conservation efforts. Offers the most up-to-date research of the species' natural history, biology and ecology Discusses current threats and solutions for species conservation that can be applied to other marine mammal species Provides updates on national and international agreements and policies for conservation efforts

Current Bibliographies in Medicine

Multidrug Resistance

January 1988 Through September
1992 : 2250 Citations

Quantities, Units and Symbols in Physical Chemistry

Royal Society of Chemistry *The first IUPAC Manual of Symbols and Terminology for Physicochemical Quantities and Units (the Green Book) of which this is the direct successor, was published in 1969, with the object of 'securing clarity and precision, and wider agreement in the use of symbols, by chemists in different countries, among physicists, chemists and engineers, and by editors of scientific journals'. Subsequent revisions have taken account of many developments in the field,*

culminating in the major extension and revision represented by the 1988 edition under the simplified title Quantities, Units and Symbols in Physical Chemistry. This 2007, Third Edition, is a further revision of the material which reflects the experience of the contributors with the previous editions. The book has been systematically brought up to date and new sections have been added. It strives to improve the exchange of scientific information among the readers in different disciplines and across different nations. In a rapidly expanding volume of scientific literature where each discipline has a tendency to retreat into its own jargon this book attempts to provide a readable compilation of widely used terms and symbols from many sources together with brief understandable definitions. This is the definitive guide for scientists and organizations working across a multitude of disciplines requiring internationally approved nomenclature.

Depression and Diabetes

John Wiley & Sons *In recent years, there has been a growing awareness of the multiple interrelationships between depression and various physical diseases. The WPA is providing an update of currently available evidence on these interrelationships by the publication of three books, dealing with the comorbidity of depression with diabetes, heart disease and cancer. Depression is a frequent and serious comorbid condition in diabetes, which adversely affects quality of life and the long-term prognosis. Co-occurrent depression presents peculiar clinical challenges, making both conditions harder to manage. Depression and Diabetes is the first book devoted to the interaction between these common disorders. World leaders in diabetes, depression and public health synthesize current evidence, including some previously unpublished data, in a concise, easy-to-read format. They provide an overview of the epidemiology, pathogenesis, medical costs, management, and public health and cultural implications of the comorbidity between depression and diabetes. The book describes how the negative consequences of depression in diabetes could be avoided, given that effective depression treatments for diabetic patients are available. Its practical approach makes the book ideal for all those involved in the management of these patients: psychiatrists, psychologists, diabetologists, general practitioners, diabetes specialist nurses and mental health nurses.*

Quantum Computation and Quantum Information

Cambridge University Press *First-ever comprehensive introduction to the major new subject of quantum computing and quantum information.*

Mathematics Standard Level for the

IB Diploma

Oxford University Press, USA *Mathematics Standard Level for the IB Diploma* is a single volume that matches the Mathematics Standard Level course of the International Baccalaureate Diploma Programme, to be taught from September 2004 for first examination in 2006. The book has been adapted in consultation with senior examiners to ensure complete and authoritative coverage of the syllabus.

Platelets

Elsevier *PLATELETS* is the definitive current source of state-of-the-art knowledge about platelets and covers the entire field of platelet biology, pathophysiology, and clinical medicine. Recently there has been a rapid expansion of knowledge in both basic biology and the clinical approach to platelet-related diseases including thrombosis and hemorrhage. Novel platelet function tests, drugs, blood bank storage methods, and gene therapies have been incorporated into patient care or are in development. This book draws all this information into a single, comprehensive and authoritative resource. · First edition won Best Book in Medical Science Award from the Association of American Publishers · Contains fourteen new chapters on topics such as platelet genomics and proteomics, inhibition of platelet function by the endothelium, clinical tests of platelet function, real time in vivo imaging of platelets, and inherited thrombocytopenias · A comprehensive full color reference comprising over 70 chapters, 1400 pages, and 16,000 references

Fundamentals of Light Microscopy and Electronic Imaging

John Wiley & Sons *Fundamentals of Light Microscopy and Electronic Imaging, Second Edition* provides a coherent introduction to the principles and applications of the integrated optical microscope system, covering both theoretical and practical considerations. It expands and updates discussions of multi-spectral imaging, intensified digital cameras, signal colocalization, and uses of objectives, and offers guidance in the selection of microscopes and electronic cameras, as well as appropriate auxiliary optical systems and fluorescent tags. The book is divided into three sections covering optical principles in diffraction and image formation, basic modes of light microscopy, and components of modern electronic imaging systems and image processing operations. Each chapter introduces relevant theory, followed by descriptions of instrument alignment and image interpretation. This revision includes new chapters on live cell imaging, measurement of protein dynamics, deconvolution microscopy, and interference microscopy. PowerPoint slides of the figures as well as other supplementary materials for instructors are available at a companion website: www.wiley.com/go/murphy/lightmicroscopy

IB Biology

Genetics Made Easy

Understanding by Design

ASCD *Presents a multifaceted model of understanding, which is based on the premise that people can demonstrate understanding in a variety of ways.*

IB Mathematics Standard Level

OUP Oxford *With more practice than any other resource, unrivalled guidance straight from the IB and the most comprehensive and correct syllabus coverage, this student book will set your learners up to excel. The only resource written with the IB curriculum team, it fully captures the IB philosophy and integrates the most in-depth assessment support.*

The Water Footprint Assessment Manual

Setting the Global Standard

Routledge *First Published in 2011. Routledge is an imprint of Taylor & Francis, an informa company.*

Mathematics Standard Level for IB Diploma Exam Preparation Guide

Cambridge University Press *A new series of Exam Preparation guides for the IB Diploma Mathematics HL and SL and Mathematical Studies. This exam preparation guide for the IB Diploma Mathematics Standard Level course breaks the course down into chapters that summarise material and present revision questions by exam question type, so that revision can be highly focused to make best use of students' time. Students can stretch themselves to achieve their best with 'going for the top' questions for those who want to achieve the highest results. Worked solutions for all the mixed and 'going for the top' questions are included, plus exam hints throughout. Guides for Mathematics Higher Level and Mathematical Studies are also available.*

Introduction to Applied Linear Algebra

Vectors, Matrices, and Least Squares

Cambridge University Press *A groundbreaking introduction to vectors, matrices, and least squares for engineering applications, offering a wealth of practical examples.*

IB Sports, Exercise & Health Science Course Book

For the IB diploma

OUP Oxford *Written by an experienced teacher, this comprehensive book will provide students with all the material and practice they need to succeed in this brand new subject area. Packed with visual explanation and practice, it will help students fully understand the science behind the body and its relationship to human well-being.*

Bayesian Data Analysis, Third Edition

CRC Press *Now in its third edition, this classic book is widely considered the leading text on Bayesian methods, lauded for its accessible, practical approach to analyzing data and solving research problems. Bayesian Data Analysis, Third Edition continues to take an applied approach to analysis using up-to-date Bayesian methods. The authors—all leaders in the statistics community—introduce basic concepts from a data-analytic perspective before presenting advanced methods. Throughout the text, numerous worked examples drawn from real applications and research emphasize the use of Bayesian inference in practice. New to the Third Edition Four new chapters on nonparametric modeling Coverage of weakly informative priors and boundary-avoiding priors Updated discussion of cross-validation and predictive information criteria Improved convergence monitoring and effective sample size calculations for iterative simulation Presentations of Hamiltonian Monte Carlo, variational Bayes, and expectation propagation New and revised software code The book can be used in three different ways. For undergraduate students, it introduces Bayesian inference*

starting from first principles. For graduate students, the text presents effective current approaches to Bayesian modeling and computation in statistics and related fields. For researchers, it provides an assortment of Bayesian methods in applied statistics. Additional materials, including data sets used in the examples, solutions to selected exercises, and software instructions, are available on the book's web page.

Edible Insects

Future Prospects for Food and Feed Security

Food & Agriculture Org *Edible insects have always been a part of human diets, but in some societies there remains a degree of disdain and disgust for their consumption. Insects offer a significant opportunity to merge traditional knowledge and modern science to improve human food security worldwide. This publication describes the contribution of insects to food security and examines future prospects for raising insects at a commercial scale to improve food and feed production, diversify diets, and support livelihoods in both developing and developed countries. Edible insects are a promising alternative to the conventional production of meat, either for direct human consumption or for indirect use as feedstock. This publication will boost awareness of the many valuable roles that insects play in sustaining nature and human life, and it will stimulate debate on the expansion of the use of insects as food and feed.*

Biology for the IB Diploma

Standard and Higher Level

This concise guide provides all the content you need for the IB Diploma in Biology at both Standard and Higher Level. Follows the structure of the IB Programme exactly and include all the options* Each topic is presented on its own page for clarity* Standard and Higher Level material clearly indicated* Plenty of practice questions* Written with an awareness that English may not be the reader's first language*

IB Physics Course Book

for the IB Diploma

OUP Oxford *The most comprehensive match to the new 2014 Chemistry syllabus, this completely revised edition gives you unrivalled support for the new concept-based approach, the Nature of science. The only DP Chemistry resource that includes support directly from the IB, focused exam practice, TOK links and real-life applications drive achievement.*

Vascular Development

John Wiley & Sons *The formation of blood vessels is an essential aspect of embryogenesis in vertebrates. It is a central feature of numerous post-embryonic processes, including tissue and organ growth and regeneration. It is also part of the pathology of tumour formation and certain inflammatory conditions. In recent years, comprehension of the molecular genetics of blood vessel formation has progressed enormously and studies in vertebrate model systems, especially the mouse and the zebrafish, have identified a common set of molecules and processes that are conserved throughout vertebrate embryogenesis while, in addition, highlighting aspects that may differ between different animal groups. The discovery in the past decade of the crucial role of new blood vessel formation for the development of cancers has generated great interest in angiogenesis (the formation of new blood vessels from pre-existing ones), with its major implications for potential cancer-control strategies. In addition, there are numerous situations where therapeutic treatments either require or would be assisted by vasculogenesis (the de novo formation of blood vessels). In particular, post-stroke therapies could include treatments that stimulate neovascularization of the affected tissues. The development of such treatments, however, requires thoroughly understanding the developmental properties of endothelial cells and the basic biology of blood vessel formation. While there are many books on angiogenesis, this unique book focuses on exactly this basic biology and explores blood vessel formation in connection with tissue development in a range of animal models. It includes detailed discussions of relevant cell biology, genetics and embryogenesis of blood vessel formation and presents insights into the cross-talk between developing blood vessels and other tissues. With contributions from vascular biologists, cell biologists and developmental biologists, a comprehensive and highly interdisciplinary volume is the outcome.*

Biochar for Environmental Management

Science and Technology

Routledge *Biochar is the carbon-rich product when biomass (such as wood, manure or crop residues) is heated in a closed container with little or no available air. It can be used to improve agriculture and the environment in several ways, and its stability in soil and superior nutrient-retention properties make it an ideal soil amendment to increase crop yields. In addition to this, biochar sequestration, in combination with sustainable biomass production, can be carbon-negative and therefore used to actively remove carbon dioxide from the atmosphere, with major implications for mitigation of climate change. Biochar production can also be combined with bioenergy production through the use of the gases that are given off in the pyrolysis*

process. This book is the first to synthesize the expanding research literature on this topic. The book's interdisciplinary approach, which covers engineering, environmental sciences, agricultural sciences, economics and policy, is a vital tool at this stage of biochar technology development. This comprehensive overview of current knowledge will be of interest to advanced students, researchers and professionals in a wide range of disciplines.

Oxford IB Diploma Programme: Mathematics Higher Level Course Companion

Oxford University Press - Children *Uniquely developed with the IB curriculum team, this online course book will ensure your students achieve their best. Blending mathematical applications with crucial practice and inquiry, it fully integrates the IB approach to learning. Full syllabus coverage - the truest match to the IB syllabus, developed with the IB to exactly match IB specifications Complete worked solutions - a full set of worked solutions included online Extensive practice - over 800 pages of practice cements comprehension Up-to-date GDC support - take the confusion out of GDC use and help students focus on the theory Definitive assessment preparation - exam-style papers and questions will build confidence The Exploration - supported by a full chapter, to guide you through this new component Real world approach - connect mathematics with human behaviour, language, morality and more About the series: The only DP resources developed directly with the IB, the Oxford IB Course Books are the most comprehensive core resources to*

PROBABILITY AND MEASURE, 3RD ED

John Wiley & Sons *Now in its new third edition, Probability and Measure offers advanced students, scientists, and engineers an integrated introduction to measure theory and probability. Retaining the unique approach of the previous editions, this text interweaves material on probability and measure, so that probability problems generate an interest in measure theory and measure theory is then developed and applied to probability. Probability and Measure provides thorough coverage of probability, measure, integration, random variables and expected values, convergence of distributions, derivatives and conditional probability, and stochastic processes. The Third Edition features an improved treatment of Brownian motion and the replacement of queuing theory with ergodic theory. · Probability · Measure · Integration · Random Variables and Expected Values · Convergence of Distributions · Derivatives and Conditional Probability · Stochastic Processes*

Oxford IB Diploma Programme: Mathematics Standard Level Course Companion

Oxford University Press - Children *With unrivalled guidance straight from the IB, over 700 pages of practice and the most comprehensive and correct syllabus coverage, this course book will set your learners up to excel. The only resource developed directly with the IB, it fully captures the IB ethos, connecting mathematical applications and practice with inquiry. Full syllabus coverage - the truest match to the IB syllabus, written with the IB to exactly match IB specifications*
Complete worked solutions - a full set of online worked solutions take learners through problems step-by-step inow updatedr Up-to-date GDC support - take the confusion out of GDC use and help students focus on the theory
Definitive assessment preparation - exam-style papers and questions will build confidence
Extensive practice - over 700 pages of practice cements comprehension
The Exploration - supported by a full chapter, to guide you through this new component
Real world approach - connect mathematics with human behaviour, language and more

A Taxonomy for Learning, Teaching, and Assessing

A Revision of Bloom's Taxonomy of Educational Objectives

Pearson *This revision of Bloom's taxonomy is designed to help teachers understand and implement standards-based curriculums. Cognitive psychologists, curriculum specialists, teacher educators, and researchers have developed a two-dimensional framework, focusing on knowledge and cognitive processes. In combination, these two define what students are expected to learn in school. It explores curriculums from three unique perspectives-cognitive psychologists (learning emphasis), curriculum specialists and teacher educators (C & I emphasis), and measurement and assessment experts (assessment emphasis). This revisited framework allows you to connect learning in all areas of curriculum. Educators, or others interested in educational psychology or educational methods for grades K-12.*

2008 Physical Activity Guidelines for Americans

Be Active, Healthy, and Happy!.

Public Health Service *The 2008 Physical Activity Guidelines for Americans provides science-based guidance to help Americans aged 6 and older improve their health through appropriate physical activity. The primary audiences for the Physical Activity Guidelines are policymakers and health professionals.*

International Encyclopedia of Unified Science

Handbook of Human Factors and Ergonomics

John Wiley & Sons *The fourth edition of the Handbook of Human Factors and Ergonomics has been completely revised and updated. This includes all existing third edition chapters plus new chapters written to cover new areas. These include the following subjects: Managing low-back disorder risk in the workplace Online interactivity Neuroergonomics Office ergonomics Social networking HF&E in motor vehicle transportation User requirements Human factors and ergonomics in aviation Human factors in ambient intelligent environments As with the earlier editions, the main purpose of this handbook is to serve the needs of the human factors and ergonomics researchers, practitioners, and graduate students. Each chapter has a strong theory and scientific base, but is heavily focused on real world applications. As such, a significant number of case studies, examples, figures, and tables are included to aid in the understanding and application of the material covered.*

An Introduction to Systems Biology

Design Principles of Biological Circuits

CRC Press *Praise for the first edition: ... superb, beautifully written and organized work that takes an engineering approach to systems biology. Alon provides nicely written appendices to explain the basic mathematical and biological concepts clearly and succinctly without interfering with the main text. He starts with a mathematical*

description of transcriptional activation and then describes some basic transcription-network motifs (patterns) that can be combined to form larger networks. – Nature [This text deserves] serious attention from any quantitative scientist who hopes to learn about modern biology ... It assumes no prior knowledge of or even interest in biology ... One final aspect that must be mentioned is the wonderful set of exercises that accompany each chapter. ... Alon's book should become a standard part of the training of graduate students. – Physics Today Written for students and researchers, the second edition of this best-selling textbook continues to offer a clear presentation of design principles that govern the structure and behavior of biological systems. It highlights simple, recurring circuit elements that make up the regulation of cells and tissues. Rigorously classroom-tested, this edition includes new chapters on exciting advances made in the last decade. Features: Includes seven new chapters The new edition has 189 exercises, the previous edition had 66 Offers new examples relevant to human physiology and disease

The Meniscus

Springer Science & Business Media *This guide focuses on the normal meniscal mechanism, body and function. Meniscal pathology and therapy are depicted in detail, followed by a presentation of long-term experience of meniscal transplantation and a look into the future of meniscal surgery.*

Introducing the IB Diploma Programme

Cambridge University Press *An ideal reference guide to introducing the IB Diploma in your school.*

The Pharmacology of Alcohol and Alcohol Dependence

Oxford University Press on Demand *This is a comprehensive review of the pharmacological effects of alcohol and the mechanisms underlying the pathogenesis of alcoholism. The book draws on general pharmacology, neuropharmacology, and alcohol studies to explore its theme. The second volume in the ALCOHOL AND ALCOHOLISM series, it focuses on the pharmacologic mechanisms underlying the development of alcoholism. The first section on basic pharmacology is concerned with those aspects that are common to all of alcohol's effects. These include pharmacokinetics, general metabolism, and cross-tolerance. The second section on neuropharmacology describes the effects of alcohol on various brain functions, including circulation and metabolism. The third section provides an in-depth review of the neurobiology of physical dependence, withdrawal, and physiological tolerance. The book as a whole gives a comprehensive and authoritative picture of the complex pharmacologic actions of alcohol, particularly on the nervous system. For clinicians*

and researchers in the field of alcohol and alcoholism, it will serve as a fundamental reference.

Biology HL