Making Modern Science Second Edition

Modern Inorganic Synthetic ChemistryThe History and Philosophy of ScienceFrom Natural Philosophy to the SciencesDarwin DeletedPostmodern WinemakingImmunopotentiators in Modern VaccinesA History of the FutureThe Foundations of Modern Science in the Middle AgesMaking Modern ScienceMerchants of DoubtThe Genesis of ScienceWorldviewsTo Explain the WorldA Century of NatureScience and the Modern WorldJung and the Making of Modern PsychologyA History of Science in SocietyModern Data Science with RThe Blank SlateMeasuring the New WorldFads and Fallacies in the Name of ScienceNature's BodyThe Selfish GeneChocolate Science and TechnologyQuantitative Human PhysiologyThe Rise of Early Modern ScienceA Short History of Nearly EverythingThe Birth of Modern ScienceMaking Natural KnowledgeMaking Modern Science, Second EditionThe Scientific Revolution and the Origins of Modern ScienceThe Chicago Guide to Communicating ScienceYoga for Better SleepThe Oxford Illustrated History of ScienceMaking Modern ScienceMaking "Nature"Social TheoryR for Data ScienceMusic and the Making of Modern ScienceScience and Creationism

Modern Inorganic Synthetic Chemistry

This study provides a brief survey and accessible guide to the most important aspects of the Scientific Revolution. As well as considering the development of the mathematical and experimental approaches to an understanding of the natural world, it looks at the crucial role of magical traditions in the origins of modern science and the importance of the Christian world-view in the shaping of the scientific endeavour. Written with the non-scientist in mind, it does not dwell on technical details but seeks to show the social, cultural, and intellectual factors which shaped the development of science in its formative stage and prepared the way for the predominance of science in modern Western culture. Taking account of the latest developments in our understanding of this vital aspect of European history, it is also a useful guide to more detailed literature for students and other interested readers.

The History and Philosophy of Science

A History of Science in Society is a concise overview that introduces complex ideas in a non-technical fashion. Andrew Ede and Lesley B. Cormack trace the history of science through its continually changing place in society and explore the link between the pursuit of knowledge and the desire to make that knowledge useful. In this edition, the authors examine the robust intellectual exchange between East and West and provide new discussions of two women in science: Maria Merian and Maria Winkelmann. A chapter on the relationship between science and war has been added as well as a section on climate change. The further readings section has been updated to reflect recent contributions to the field. Other new features include timelines at the end of each chapter, 70 upgraded illustrations, and new maps of Renaissance Europe, Captain James Cook's voyages, the 2nd voyage of the Beagle, and the main war front during World War I.

From Natural Philosophy to the Sciences

This second edition provides information on recent advances in the science and technology of chocolate manufacture and the entire international cocoa industry. It provides detailed review on a wide range of topics including cocoa production, cocoa and chocolate manufacturing operations, sensory perception of chocolate quality, flavour release and perception, sugar replacement and alternative sweetening solutions in chocolate production, industrial manufacture of sugar-free chocolates as well as the nutrition and health benefits of cocoa and chocolate consumption. The topics cover modern cocoa cultivation and production practices with special attention on cocoa bean composition, genotypic variations in the bean,

post-harvest pre-treatments, fermentation and drying processes, and the biochemical basis of these operations. The scientific principles behind industrial chocolate manufacture are outlined with detailed explanations of the various stages of chocolate manufacturing including mixing, refining, conching and tempering. Other topics covered include the chemistry of flavour formation and development during cocoa processing and chocolate manufacture; volatile flavour compounds and their characteristics and identification; sensory descriptions and character; and flavour release and perception in chocolate. The nutritional and health benefits of cocoa and chocolate consumption as well as the application of HACCP and other food safety management systems such as ISO 22,000 in the chocolate processing industry are also addressed. Additionally, detailed research on the influence of different raw materials and processing operations on the flavour and other quality characteristics of chocolates have been provided with scope for process optimization and improvement. The book is intended to be a desk reference for all those engaged in the business of making and using chocolate worldwide; confectionery and chocolate scientists in industry and academia; students and practising food scientists and technologists; nutritionists and other health professionals; and libraries of institutions where agriculture, food science and nutrition is studied and researched.

Darwin Deleted

"This book introduces you to R, RStudio, and the tidyverse, a collection of R packages designed to work together to make data science fast, fluent, and fun. Suitable for readers with no previous programming experience"--

Postmodern Winemaking

In Postmodern Winemaking, Clark Smith shares the extensive knowledge he has accumulated in engaging, humorous, and erudite essays that convey a new vision of the winemaker's craft--one that credits the crucial roles played by both science and art in the winemaking process. Smith, a leading innovator in red wine production techniques, explains how traditional enological education has led many winemakers astray--enabling them to create competent, consistent wines while putting exceptional wines of structure and mystery beyond their grasp. Great wines, he claims, demand a personal and creative engagement with many elements of the process. His lively exploration of the facets of postmodern winemaking, together with profiles of some of its practitioners, is both entertaining and enlightening.

Immunopotentiators in Modern Vaccines

This book reviews recent writing on the history of science and shows how it has been dramatically reshaped by a new understanding of science itself. In the last few years, scientific knowledge has come to be seen as a product of human culture. This new approach has challenged the tradition of the history of science as a story of steady and autonomous progress.

A History of the Future

A masterful commentary on the history of science from the Greeks to modern times, by Nobel Prize-winning physicist Steven Weinberg—a thought-provoking and important book by one of the most distinguished scientists and intellectuals of our time. In this rich, irreverent, and compelling history, Nobel Prize-winning physicist Steven Weinberg takes us across centuries from ancient Miletus to medieval Baghdad and Oxford, from Plato’s Academy and the Museum of Alexandria to the cathedral school of Chartres and the Royal Society of London. He shows that the scientists of ancient and medieval times not only did not understand what we understand about the world—they did not understand

what there is to understand, or how to understand it. Yet over the centuries, through the struggle to solve such mysteries as the curious backward movement of the planets and the rise and fall of the tides, the modern discipline of science eventually emerged. Along the way, Weinberg examines historic clashes and collaborations between science and the competing spheres of religion, technology, poetry, mathematics, and philosophy. An illuminating exploration of the way we consider and analyze the world around us, To Explain the World is a sweeping, ambitious account of how difficult it was to discover the goals and methods of modern science, and the impact of this discovery on human knowledge and development.

The Foundations of Modern Science in the Middle Ages

The History and Philosophy of Science: A Reader brings together seminal texts from antiquity to the end of the nineteenth century and makes them accessible in one volume for the first time. With readings from Aristotle, Aquinas, Copernicus, Galileo, Descartes, Newton, Lavoisier, Linnaeus, Darwin, Faraday, and Maxwell, it analyses and discusses major classical, medieval and modern texts and figures from the natural sciences. Grouped by topic to clarify the development of methods and disciplines and the unification of theories, each section includes an introduction, suggestions for further reading and end-of-section discussion questions, allowing students to develop the skills needed to: § read, interpret, and critically engage with central problems and ideas from the history and philosophy of science § understand and evaluate scientific material found in a wide variety of professional and popular settings § appreciate the social and cultural context in which scientific ideas emerge § identify the roles that mathematics plays in scientific inquiry Featuring primary sources in all the core scientific fields - astronomy, physics, chemistry, and the life sciences - The History and Philosophy of Science: A Reader is ideal for students looking to better understand the origins of natural science and the questions asked throughout its history. By taking a thematic approach to introduce influential assumptions, methods and answers, this reader illustrates the implications of an impressive range of values and ideas across the history and philosophy of Western science.

Making Modern Science

During the 19th century, much of the modern scientific enterprise took shape: scientific disciplines were formed, institutions and communities were founded and unprecedented applications to and interactions with other aspects of society and culture occurred. taught us about this exciting time and identify issues that remain unexamined or require reconsideration. They treat scientific disciplines - biology, physics, chemistry, the earth sciences, mathematics and the social sciences - in their specific intellectual and sociocultural contexts as well as the broader topics of science and medicine; science and religion; scientific institutions and communities; and science, technology and industry. From Natural Philosophy to the Sciences should be valuable for historians of science, but also of great interest to scholars of all aspects of 19th-century life and culture.

Merchants of Doubt

Quantitative Human Physiology: An Introduction is the first text to meet the needs of the undergraduate bioengineering student who is being exposed to physiology for the first time, but requires a more analytical/quantitative approach. This book explores how component behavior produces system behavior in physiological systems. Through text explanation, figures, and equations, it provides the engineering student with a basic understanding of physiological principles with an emphasis on quantitative aspects. Features a quantitative approach that includes physical and chemical principles Provides a more integrated approach from first principles, integrating anatomy, molecular biology, biochemistry and

physiology Includes clinical applications relevant to the biomedical engineering student (TENS, cochlear implants, blood substitutes, etc.) Integrates labs and problem sets to provide opportunities for practice and assessment throughout the course NEW FOR THE SECOND EDITION Expansion of many sections to include relevant information Addition of many new figures and re-drawing of other figures to update our understanding and clarify difficult areas Substantial updating of the text to reflect newer research results Addition of several new appendices including statistics, nomenclature of transport carriers, and structural biology of important items such as the neuromuscular junction and calcium release unit Addition of new problems within the problem sets Addition of commentary to power point presentations

The Genesis of Science

Immunopotentiators in Modern Vaccines provides an in-depth insight and overview of a number of most promising immunopotentiators in modern vaccines. In contrast to existing books on the subject it provides recent data on the critical mechanisms governing the activity of vaccine adjuvants and delivery systems. Knowledge of immunological pathways and scenarios of the cells and molecules involved is described and depicted in comprehensive illustrations. Contributions from leading international authorities in the field Well-illustrated, informative figures present the interactions between immunopotentiators and the host immune system Each chapter lists advantages and potential hurdles for achieving a practical application for the specific immunopentiator

Worldviews

This 2003 book examines why modern science arose only in the West and not in other civilizations.

To Explain the World

Prior to 1735, South America was terra incognita to many Europeans. But that year, the Paris Academy of Sciences sent a mission to the Spanish American province of Quito (in present-day Ecuador) to study the curvature of the earth at the Equator. Equipped with quadrants and telescopes, the mission’s participants referred to the transfer of scientific knowledge from Europe to the Andes as a “sacred fire” passing mysteriously through European astronomical instruments to observers in South America. By taking an innovative interdisciplinary look at the traces of this expedition, Measuring the New World examines the transatlantic flow of knowledge from West to East. Through ephemeral monuments and geographical maps, this book explores how the social and cultural worlds of South America contributed to the production of European scientific knowledge during the Enlightenment. Neil Safier uses the notebooks of traveling philosophers, as well as specimens from the expedition, to place this particular scientific endeavor in the larger context of early modern print culture and the emerging intellectual category of scientist as author.

A Century of Nature

This edition of Science and Creationism summarizes key aspects of several of the most important lines of evidence supporting evolution. It describes some of the positions taken by advocates of creation science and presents an analysis of these claims. This document lays out for a broader audience the case against presenting religious concepts in science classes. The document covers the origin of the universe, Earth, and life; evidence supporting biological evolution; and human evolution. (Contains 31 references.) (CCM)

Science and the Modern World

The famed mathematician and philosopher takes readers on a journey into a new scientific age, exploring topics from relativity to religion. Alfred North Whitehead, one of the great figures in the philosophy of science, wrote this prescient work nearly a century ago. Yet, in an era that has us reckoning with science and technology’s place and meaning in our lives, it remains as relevant as ever. Science and the Modern World puts scientific discovery into historical and cultural context—exploring the effects of science and people on each other. “It is a work not only of the first importance but also of great beauty. . . . Vivid writing.” —Nature

Jung and the Making of Modern Psychology

Making "Nature" is the first book to chronicle the foundation and development of Nature, one of the world's most influential scientific institutions. Now nearing its hundred and fiftieth year of publication, Nature is the international benchmark for scientific publication. Its contributors include Charles Darwin, Ernest Rutherford, and Stephen Hawking, and it has published many of the most important discoveries in the history of science, including articles on the structure of DNA, the discovery of the neutron, the first cloning of a mammal, and the human genome. But how did Nature become such an essential institution? In Making "Nature," Melinda Baldwin charts the rich history of this extraordinary publication from its foundation in 1869 to current debates about online publishing and open access. This pioneering study not only tells Nature's story but also sheds light on much larger questions about the history of science publishing, changes in scientific communication, and shifting notions of "scientific community." Nature, as Baldwin demonstrates, helped define what science is and what it means to be a scientist.

A History of Science in Society

Documents the troubling influence of a small group of scientists who the author contends misrepresent scientific facts to advance key political and economic agendas, revealing the interests behind their detractions on findings about acid rain, DDT, and other hazards.

Modern Data Science with R

A brilliant inquiry into the origins of human nature. "Sweeping, erudite, sharply argued, and fun to read..also highly persuasive." -Time Now updated with a new afterword One of the world's leading experts on language and the mind explores the idea of human nature and its moral, emotional, and political colorings. With characteristic wit, lucidity, and insight, Pinker argues that the dogma that the mind has no innate traits-a doctrine held by many intellectuals during the past century-denies our common humanity and our individual preferences, replaces objective analyses of social problems with feel-good slogans, and distorts our understanding of politics, violence, parenting, and the arts. Injecting calm and rationality into debates that are notorious for ax-grinding and mud-slinging, Pinker shows the importance of an honest acknowledgment of human nature based on science and common sense.

The Blank Slate

Winner of the Ludwik Fleck Book Prize, Society for Social Studies of Science, 1995 "Schiebinger lays bare the cultural narratives that mix so easily with science. They are at the same time hilarious and eerie, silly and profoundly disturbing. Schiebinger is brilliant in showing how tales of gender and race are told in other guises."--Thomas Laqueur, author of Making Sex: Body and Gender from the Greeks to Freud

"[Nature's Body] is so wonderfully humorous and is done with such careful attention to detail, the reader cannot help but see the profound implications of the history of science for modern science. Indispensable for all anthropologists, historians, philosophers, and practitioners of science."--Emily Martin, author of The Woman in the Body Eighteenth-century natural historians created a peculiar, and peculiarly durable, vision of nature--one that embodied the sexual and racial tensions of that era. When plants were found to reproduce sexually, eighteenth-century botanists ascribed to them passionate relations, polyandrous marriages, and suicidal incest, and accounts of steamy plant sex began to infiltrate the botanical literature of the day. Naturalists also turned their attention to the great apes just becoming known to eighteenth-century Europeans, clothing the females in silk vestments and training them to sip tea with the modest demeanor of English matrons, while imagining the males of the species fully capable of ravishing women. Written with humor and meticulous detail, Nature's Body draws on these and other examples to uncover the ways in which assumptions about gender, sex, and race have shaped scientific explanations of nature. Schiebinger offers a rich cultural history of science and a timely and passionate argument that science must be restructured in order to get it right.

Measuring the New World

Modern Inorganic Synthetic Chemistry, Second Edition captures, in five distinct sections, the latest advancements in inorganic synthetic chemistry, providing materials chemists, chemical engineers, and materials scientists with a valuable reference source to help them advance their research efforts and achieve breakthroughs. Section one includes six chapters centering on synthetic chemistry under specific conditions, such as high-temperature, low-temperature and cryogenic, hydrothermal and solvothermal, high-pressure, photochemical and fusion conditions. Section two focuses on the synthesis and related chemistry problems of highly distinct categories of inorganic compounds, including superheavy elements, coordination compounds and coordination polymers, cluster compounds, organometallic compounds, inorganic polymers, and nonstoichiometric compounds. Section three elaborates on the synthetic chemistry of five important classes of inorganic functional materials, namely, ordered porous materials, carbon materials, advanced ceramic materials, host-guest materials, and hierarchically structured materials. Section four consists of four chapters where the synthesis of functional inorganic aggregates is discussed, giving special attention to the growth of single crystals, assembly of nanomaterials, and preparation of amorphous materials and membranes. The new edition’s biggest highlight is Section five where the frontier in inorganic synthetic chemistry is reviewed by focusing on biomimetic synthesis and rationally designed synthesis. Focuses on the chemistry of inorganic synthesis, assembly, and organization of wide-ranging inorganic systems Covers all major methodologies of inorganic synthesis Provides state-of-the-art synthetic methods Includes real examples in the organization of complex inorganic functional materials Contains more than 4000 references that are all highly reflective of the latest advancement in inorganic synthetic chemistry Presents a comprehensive coverage of the key issues involved in modern inorganic synthetic chemistry as written by experts in the field

Fads and Fallacies in the Name of Science

In this new edition of the top-selling coursebook, seasoned historians Peter J. Bowler and Iwan Rhys Morus expand on their authoritative survey of how the development of science has shaped our world. Exploring both the history of science and its influence on modern thought, the authors chronicle the major developments in scientific thinking, from the revolutionary ideas of the seventeenth century to contemporary issues in genetics, physics, and more. Thoroughly revised and expanded, the second edition draws on the latest research and scholarship. It also contains two entirely new chapters: one that explores the impact of computing on the development of science, and another that shows how the West used science and technology as tools for geopolitical expansion. Designed for entry-level college courses

and as a single-volume introduction for the general reader, Making Modern Science presents the history of science not as a series of names and dates, but as an interconnected and complex web of relationships joining science and society.

Nature's Body

This 1997 book views the substantive achievements of the Middle Ages as they relate to early modern science.

The Selfish Gene

An ethologist shows man to be a gene machine whose world is one of savage competition and deceit

Chocolate Science and Technology

PRAISE FOR PREVIOUS EDITIONS "This is a brilliantly clear introduction (and indeed reframing) of the history and philosophy of science in terms of worldviews and their elements…. In addition, the book is incredibly well-informed from both a scientific and philosophical angle. Highly recommended." Scientific and Medical Network "Unlike many other introductions to philosophy of science, DeWitt's book is at once historically informative and philosophically thorough and rigorous. Chapter notes, suggested readings, and references enhance its value." Choice "Written in clear and comprehensible prose and supplemented by effective diagrams and examples, Worldviews is an ideal text for anyone new to the history and philosophy of science. As the reader will come to find out, DeWitt is a gifted writer with the unique ability to break down complex and technical concepts into digestible parts, making Worldviews a welcoming and not overwhelming book for the introductory reader." History and Philosophy of the Life Sciences, vol. 28(2) Now in its third edition, Worldviews: An Introduction to the History and Philosophy of Science strengthens its reputation as the most accessible and teachable introduction to the history and philosophy of science on the market. Geared toward engaging undergraduates and those approaching the history and philosophy of science for the first time, this intellectually-provocative volume takes advantage of its author's extensive teaching experience, parsing complex ideas using straightforward and sensible examples drawn from the physical sciences. Building on the foundations which earned the book its critical acclaim, author Richard DeWitt considers fundamental issues in the philosophy of science through the historical worldviews that influenced them, charting the evolution of Western science through the rise and fall of dominant systems of thought. Chapters have been updated to include discussion of recent findings in quantum theory, general relativity, and evolutionary theory, and two new chapters exclusive to the third edition enrich its engagement with radical developments in contemporary science. At a time in modern history when the nature of truth, fact, and reality seem increasingly controversial, the third edition of Worldviews presents complex concepts with clarity and verve, and prepares inquisitive minds to engage critically with some of the most exciting questions in the philosophy of science.

Quantitative Human Physiology

Offers practical advice on how to create different types of scientific communications, from research papers and grant proposals to articles, speeches, interviews, and e-mail messages, providing sample writings from a variety of disciplines and including coverage of Internet science and graphics. Simultaneous.

The Rise of Early Modern Science

The Not-So-Dark Dark Ages What they forgot to teach you in school: People in the Middle Ages did not think the world was flat The Inquisition never executed anyone because of their scientific ideologies It was medieval scientific discoveries, including various methods, that made possible Western civilization's "Scientific Revolution" As a physicist and historian of science James Hannam debunks myths of the Middle Ages in his brilliant book The Genesis of Science: How the Christian Middle Ages Launched the Scientific Revolution. Without the medieval scholars, there would be no modern science. Discover the Dark Ages and their inventions, research methods, and what conclusions they actually made about the shape of the world.

A Short History of Nearly Everything

Fair, witty appraisal of cranks, quacks, and quackeries of science and pseudoscience: hollow earth, Velikovsky, orgone energy, Dianetics, flying saucers, Bridey Murphy, food and medical fads, and much more.

The Birth of Modern Science

The development of science, according to respected scholars Peter J. Bowler and Iwan Rhys Morus, expands our knowledge and control of the world in ways that affect-but are also affected by-society and culture. In Making Modern Science, a text designed for introductory college courses in the history of science and as a single-volume introduction for the general reader, Bowler and Morus explore both the history of science itself and its influence on modern thought. Opening with an introduction that explains developments in the history of science over the last three decades and the controversies these initiatives have engendered, the book then proceeds in two parts. The first section considers key episodes in the development of modern science, including the Scientific Revolution and individual accomplishments in geology, physics, and biology. The second section is an analysis of the most important themes stemming from the social relations of science-the discoveries that force society to rethink its religious, moral, or philosophical values. Making Modern Science thus chronicles all major developments in scientific thinking, from the revolutionary ideas of the seventeenth century to the contemporary issues of evolutionism, genetics, nuclear physics, and modern cosmology. Written by seasoned historians, this book will encourage students to see the history of science not as a series of names and dates but as an interconnected and complex web of relationships between science and modern society. The first survey of its kind, Making Modern Science is a much-needed and accessible introduction to the history of science, engagingly written for undergraduates and curious readers alike.

Making Natural Knowledge

In the natural science of ancient Greece, music formed the meeting place between numbers and perception; for the next two millennia, Pesic tells us in Music and the Making of Modern Science, "liberal education" connected music with arithmetic, geometry, and astronomy within a fourfold study, the quadrivium. Peter Pesic argues provocatively that music has had a formative effect on the development of modern science -- that music has been not just a charming accompaniment to thought but a conceptual force in its own right. Pesic explores a series of episodes in which music influenced science, moments in which prior developments in music arguably affected subsequent aspects of natural science. He describes encounters between harmony and fifteenth-century cosmological controversies, between musical initiatives and irrational numbers, between vibrating bodies and the emergent electromagnetism. He offers lively accounts of how Newton applied the musical scale to define the colors in the spectrum; how Euler and others applied musical ideas to develop the wave theory of light; and how a harmonium prepared Max Planck to find a quantum theory that reengaged the mathematics of

vibration. Taken together, these cases document the peculiar power of music -- its autonomous force as a stream of experience, capable of stimulating insights different from those mediated by the verbal and the visual. An innovative e-book edition available for iOS devices will allow sound examples to be played by a touch and shows the score in a moving line.

Making Modern Science, Second Edition

A history of science text imagining how evolutionary theory and biology would have been understood if Darwin had never published his "Origin of Species" and other works.--publisher summary.

The Scientific Revolution and the Origins of Modern Science

This history of the birth of modern science shatters the illusion that science is 'dry' and divorced from culture by exploring the powerful clashes between traditions and value systems that gave rise to it. The author shows how many of the characteristics that distinguish science today emerged in the midst of the wars and plagues of the seventeenth century and defines what was new about this form of knowledge.

The Chicago Guide to Communicating Science

The eighteenth-century Enlightenment saw the birth of an era which sought legitimacy not from the past but from the future. No longer would human beings invoke the authority of tradition; instead, modern societies emerging in the West justified themselves by their success at increasing, through the application of scientific knowledge, human control over the world. Ever since this notion of modernity was formulated it has provoked intense debate. In this wide-ranging historical introduction to social theory, Alex Callinicos explores the controversies over modernity and examines the connections between social theory and modern philosophy, political economy and evolutionary biology. He offers clear and accesssible treatments of the thought of Montesquieu, Adam Smith and the Scottish Enlightenment, Hegel, Marx, Tocqueville, Maistre, Gobineau, Darwin, Spencer, Kautsky, Nietzsche, Durkheim, Weber, Simmel, Freud, Lukacs, Gramsci, Heidegger, Keynes, Hayek, Parsons, the Frankfurt School, Levi-Strauss, Althusser, Foucault, Habermas and Bourdieu, and concludes by surveying the state of contemporary social thought. A remarkably comprehensive and lucid primer, Social Theoryis essential reading for students of politics, sociology and social and political thought.

Yoga for Better Sleep

Learn simple yoga techniques--poses, meditations, and breathwork--to sleep better and longer, from master yoga teacher trainer and author, Mark Stephens Although modern science has unraveled some of the mysteries of our sleeping, dreaming, and waking states and age-old yoga practices are helping us enjoy better sleep, clearer minds, and healthier bodies, over 65 percent of U.S. adults are still sleep deprived. Sleep deprivation causes and aggravates ailments like stress, heart conditions, high blood pressure, obesity, and depression. Master yoga teacher, trainer, and best-selling author Mark Stephens provides easy-to-do, effective yoga activities--including postural sequences, breathing exercises, and meditation practices--for better sleep, no matter your age. He integrates the ancient wisdom of yoga with the insights of modern neuroscience and psychology to offer practical age- and condition-specific tools and sequences for improving sleep naturally and without drugs.

The Oxford Illustrated History of Science

One of the world’s most beloved and bestselling writers takes his ultimate journey -- into the most

intriguing and intractable questions that science seeks to answer. In A Walk in the Woods, Bill Bryson trekked the Appalachian Trail -- well, most of it. In In A Sunburned Country, he confronted some of the most lethal wildlife Australia has to offer. Now, in his biggest book, he confronts his greatest challenge: to understand -- and, if possible, answer -- the oldest, biggest questions we have posed about the universe and ourselves. Taking as territory everything from the Big Bang to the rise of civilization, Bryson seeks to understand how we got from there being nothing at all to there being us. To that end, he has attached himself to a host of the world's most advanced (and often obsessed) archaeologists, anthropologists, and mathematicians, travelling to their offices, laboratories, and field camps. He has read (or tried to read) their books, pestered them with questions, apprenticed himself to their powerful minds. A Short History of Nearly Everything is the record of this quest, and it is a sometimes profound, sometimes funny, and always supremely clear and entertaining adventure in the realms of human knowledge, as only Bill Bryson can render it. Science has never been more involving or entertaining. From the Hardcover edition.

Making Modern Science

The development of science, according to respected scholars Peter J. Bowler and Iwan Rhys Morus, expands our knowledge and control of the world in ways that affect-but are also affected by-society and culture. In Making Modern Science, a text designed for introductory college courses in the history of science and as a single-volume introduction for the general reader, Bowler and Morus explore both the history of science itself and its influence on modern thought. Opening with an introduction that explains developments in the history of science over the last three decades and the controversies these initiatives have engendered, the book then proceeds in two parts. The first section considers key episodes in the development of modern science, including the Scientific Revolution and individual accomplishments in geology, physics, and biology. The second section is an analysis of the most important themes stemming from the social relations of science-the discoveries that force society to rethink its religious, moral, or philosophical values. Making Modern Science thus chronicles all major developments in scientific thinking, from the revolutionary ideas of the seventeenth century to the contemporary issues of evolutionism, genetics, nuclear physics, and modern cosmology. Written by seasoned historians, this book will encourage students to see the history of science not as a series of names and dates but as an interconnected and complex web of relationships between science and modern society. The first survey of its kind, Making Modern Science is a much-needed and accessible introduction to the history of science, engagingly written for undergraduates and curious readers alike.

Making "Nature"

Many of the scientific breakthroughs of the twentieth century were first reported in the journal Nature. A Century of Nature brings together in one volume Nature's greatest hits—reproductions of seminal contributions that changed science and the world, accompanied by essays written by leading scientists (including four Nobel laureates) that provide historical context for each article, explain its insights in graceful, accessible prose, and celebrate the serendipity of discovery and the rewards of searching for needles in haystacks.

Social Theory

The Oxford Illustrated History of Science is the first ever fully illustrated global history of science, from Aristotle to the atom bomb - and beyond. The first part of the book tells the story of science in both East and West from antiquity to the Enlightenment: from the ancient Mediterranean world to ancient China; from the exchanges between Islamic and Christian scholars in the Middle Ages to the Chinese invention

of gunpowder, paper, and the printing press; from the Scientific Revolution of sixteenth and seventeenth century Europe to the intellectual ferment of the eighteenth century. The chapters that follow focus on the increasingly specialized story of science since end of the eighteenth century, covering experimental science in the laboratory from Michael Faraday to CERN; the exploration of nature, from intrepid Victorian explorers to twentieth century primatologists; the mapping of the universe, from the discovery of Uranus to Big Bang theory; the impact of evolutionary ideas, from Lamarck, Darwin, and Wallace to DNA; and the story of theoretical physics, from James Clark Maxwell to Quantum Theory and beyond. A concluding chapter reflects on how scientists have communicated their work to a wider public, from the Great Exhibition of 1851 to the internet in the early twenty-first century.

R for Data Science

Modern Data Science with R is a comprehensive data science textbook for undergraduates that incorporates statistical and computational thinking to solve real-world problems with data. Rather than focus exclusively on case studies or programming syntax, this book illustrates how statistical programming in the state-of-the-art R/RStudio computing environment can be leveraged to extract meaningful information from a variety of data in the service of addressing compelling statistical questions. Contemporary data science requires a tight integration of knowledge from statistics, computer science, mathematics, and a domain of application. This book will help readers with some background in statistics and modest prior experience with coding develop and practice the appropriate skills to tackle complex data science projects. The book features a number of exercises and has a flexible organization conducive to teaching a variety of semester courses.

Music and the Making of Modern Science

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Science and Creationism

In this wide-ranging survey, Peter J. Bowler explores the phenomenon of futurology: predictions about the future development and impact of science and technology on society and culture in the twentieth century. Utilising science fiction, popular science literature and the novels of the literary elite, Bowler highlights contested responses to the potential for revolutionary social change brought about by real and imagined scientific innovations. Charting the effect of social and military developments on attitudes towards innovation in Europe and America, Bowler shows how conflict between the enthusiasm of technocrats and the pessimism of their critics was presented to the public in books, magazines and exhibitions, and on the radio and television. A series of case studies reveals the impact of technologies such as radio, aviation, space exploration and genetics, exploring rivalries between innovators and the often unexpected outcome of their efforts to produce mechanisms and machines that could change the world.