

Encyclopedia Of Science Technology And Ethics

From the invention of eyeglasses to the Internet, this three-volume set examines the pivotal effects that inventions have had on society, providing a fascinating history of technology and innovations in the United States from the earliest colonization by Europeans to the present. □ Encourages readers to consider the tremendous potential impact of advances in science and technology and the ramifications of important inventions on the global market, human society, and even the planet as a whole □ Supports eras addressed in the National Standards for American history as well as curricular units on inventions, discoveries, and technological advances □ Includes primary documents, a chronology, and section openers that help readers contextualize the content

"In addition to providing coverage of specific scientific and technological subjects the encyclopedia includes entries that analyze the philosophical and methodological underpinnings of science and technology. In these pages the reader will find discussions of scientific paradigms, theories, and hypotheses, as well as several entries that analyze how science is done. In the realm of technology, there are entries that look into such subjects as the relationships of technology to science, the diffusion of new technologies, and how technologies have been influenced by their social settings."--Introduction, p. vii.

Each entry gives short to lengthy biographical information. Subject and name index.

"This comprehensive reference work provides immediate, fingertip access to state-of-the-art technology in nearly 700 self-contained articles written by over 900 international authorities. Each article in the Encyclopedia features current developments and trends in computers, software, vendors, and applications...extensive bibliographies of leading figures in the field, such as Samuel Alexander, John von Neumann, and Norbert Wiener...and in-depth analysis of future directions."

Medieval Science, Technology, and Medicine
The Encyclopedia of Science, Technology, and Society
Encyclopedia of Sustainable Technologies
Encyclopedia of Portal Technologies and Applications
An International Reference Work in Twenty Volumes Including an Index

"This set of books represents a detailed compendium of authoritative, research-based entries that define the contemporary state of knowledge on technology"--Provided by publisher.

'Science, Technology, and Society' offers approximately 150 articles written by major scholars and experts from academic and scientific institutions worldwide. The theme is the functions and effects of science and technology in society and culture.

The book provides clear descriptions, definitions and explanations of difficult scientific concepts, carefully chosen to reflect the needs of those involved in primary science education.

This encyclopedia considers both the professional ethics of science and technology, and the social, ethical, and political issues raised by science and technology.

Asimov's Biographical Encyclopedia of Science and Technology
Encyclopedia of Science and Technology Communication
Encyclopedia of Polymer Science and Engineering
The Facts On File Encyclopedia of Science, Technology, and Society: O-Z
Volume 8 - Earth and Planetary Sciences to General Systems

Extensively updated and revised, this outstanding reference remains the definitive scientific resource for both academic and professional environments Van Nostrand's Scientific Encyclopedia has long enjoyed a reputation as one of the most important comprehensive general scientific references available. Substantially revised to cover the many developments since the Eight Edition in 1994, this Ninth Edition ranges across all scientific disciplines as well as many areas of engineering and technology. Topics covered include animal science, anatomy, astronomy, atmospheric science, chemistry, chemical engineering, civil engineering, computer science, earth science, energy sources, information science, life science, materials, mathematics, mechanical engineering, medicine, mining, physics, physiology, planetary science, plant science, power technology, space science, structural engineering, and a host of other subjects. Existing material has been extensively revised for this new edition, and numerous new articles bring the Encyclopedia up-to-date on the latest developments and state-of-the-art knowledge in every discipline. An expanded subject index makes information easier to find. An extensive revision program makes this series an important addition to personal as well as institutional libraries in both academic and industrial settings.

"The Encyclopedia covers every aspect of science and technology, including natural history, earth science, physics, chemistry, astronomy, mathematics, information technology, and much more. Unlike most other science encyclopedias, this one also features biographies of more than 850 famous scientists."--BOOK JACKET.

Today's children stand on the threshold of a new millennium that promises incredible scientific and technological advances. The need to understand basic scientific principles has never been greater and these principles are brought within the grasp of every child by The Kingfisher Science Encyclopedia. All the essential subject areas, from Space and Time, Materials and Technology, to Human Biology, are covered in this one-volume encyclopedia. Accurate, approachable, and an indispensable source of information for school projects, The Kingfisher Science Encyclopedia is the perfect gift for the up-and-coming Bill Gates, Albert Einstein, or Marie Curie in the family. Special Features: More than 3,500 indexed references. Thematic arrangement. Important events highlighted. Illustrated biographies of key figures. Cross-references. Comprehensive index. Glossary.

For a free 30-day online trial to this title, visit www.sagepub.com/freetrial In the academic world, the term "science communication" refers both to a set of professions (such as science journalism and public information work) and to an interdisciplinary scholarly research specialization. Much of this research is aimed at improving our understanding of the best ways to communicate complex information, especially to people who are not scientists. Science communication specialists are concerned with giving people useful information about health, environment, and technology – as well as science itself. In order to do this, we also need to improve our understanding of how people think, form opinions, and process information. Additionally, professional practitioners in science communication are engaged in strategic and ethical decisions every day, such as: How should reporters cover the issue of climate change? Should the views of scientists who do not believe that climate change has been caused by human activity be included alongside the views of those who do, in order to give a "balanced" story, or does this mislead the public into thinking that both of these positions are equally accepted within the scientific community? The Encyclopedia of Science and Technology Communication provides information on the entire range of interrelated issues in this interdisciplinary field in one place, along with clear suggestions on where to begin the search for more. Geared towards undergraduate and graduate students in journalism, communication, mass communication, and media studies, as well as towards working journalists, public information officers, and public relations specialists, this encyclopedia introduces this vast, fascinating field while challenging the reader to question assumptions inherent in communication across disciplinary boundaries. Key Themes Associations and Organizations Audiences, Opinions, and Effects Challenges, Issues, and Controversies Changing Awareness, Opinion, And Behavior Critical Influences and Events Global and International Aspects Government Agencies (US) History, Philosophy, and Sociology of Science Important Figures Journal Publications Key Cases and Current Trends Law, Policy, Ethics, and Beliefs Major Infrastructural Initiatives Practices, Strategies, and Tools Professional Roles and Careers Public Engagement Approaches Theory and Research Venues and Channels

Science, Technology, and Applications

The Lives and Achievements of 1195 Great Scientists from Ancient Times to the Present, Chronologically Arranged

Encyclopedia of Ethics in Science and Technology

An Encyclopedia

Encyclopedia of the Sciences of Learning

Over the past century, educational psychologists and researchers have posited many theories to explain how individuals learn, i.e. how they acquire, organize and deploy knowledge and skills. The 20th century can be considered the century of psychology on learning and related fields of interest (such as motivation, cognition, metacognition etc.) and it is fascinating to see the various mainstreams of learning, remembered and forgotten over the 20th century and note that basic assumptions of early theories survived several paradigm shifts of psychology and epistemology. Beyond folk psychology and its naive theories of learning, psychological learning theories can be grouped into some basic categories, such as behaviorist learning theories, connectionist learning theories, cognitive learning theories, constructivist learning theories, and social learning theories. Learning theories are not limited to psychology and related fields of interest but rather we can find the topic of learning in various disciplines, such as philosophy and epistemology, education, information science, biology, and – as a result of the emergence of computer technologies – especially also in the field of computer sciences and artificial intelligence. As a consequence, machine learning struck a chord in the 1980s and became an important field of the learning sciences in general. As the learning sciences became more specialized and complex, the various fields of interest were widely spread and separated from each other; as a consequence, even presently, there is no comprehensive overview of the sciences of learning or the central theoretical concepts and vocabulary on which researchers rely. The Encyclopedia of the Sciences of Learning provides an up-to-date, broad and authoritative coverage of the specific terms mostly used in the sciences of learning and its related fields, including relevant areas of instruction, pedagogy, cognitive sciences, and especially machine learning and knowledge engineering. This modern compendium will be an indispensable source of information for scientists, educators, engineers, and technical staff active in all fields of learning. More specifically, the Encyclopedia provides fast access to the most relevant theoretical terms provides up-to-date, broad and authoritative coverage of the most important theories within the various fields of the learning sciences and adjacent sciences and communication technologies; supplies clear and precise explanations of the theoretical terms, cross-references to related entries and up-to-date references to important research and publications. The Encyclopedia also contains biographical entries of individuals who have substantially contributed to the sciences of learning; the entries are written by a distinguished panel of researchers in the various fields of the learning sciences.

Presents nearly one thousand entries and 750 illustrations on science and technology, with bibliographies after each entry and sidebars containing relevant facts.

This is the first scholarly reference work to cover all the major scientific themes and facets of the subject of seeds. It outlines the latest fundamental biological knowledge about seeds, together with the principles of agricultural seed processing, storage and sowing, the food and industrial uses of seeds, and the roles of seeds in history, economies and cultures. With contributions from 110 expert authors worldwide, the editors have created 560 authoritative articles, illustrated with plentiful tables, figures, black-and-white and color photographs, suggested further reading matter and 670 supplementary definitions. The contents are alphabetically arranged and cross-referenced to connect related entries.

Covers various aspects of science and technology, including natural history, earth science, physics, chemistry, astronomy, mathematics, and information technology

The International Encyclopedia of Science and Technology

Social Issues in Science and Technology

Nuclear Energy Encyclopedia

Encyclopedia of Gender and Information Technology

An exploration of the controversies surrounding the impact of science and technology on daily life discusses such subjects as cloning, needle exchange programs, zero population growth, and electroconvulsive shock therapy.

"This two volume set includes 213 entries with over 4,700 references to additional works on gender and information technology"--Provided by publisher.

Covers the central concepts, people, facts, phenomena, and controversies in the ethics of science and technology, as well as the seminal figures and formative ideas in the two fields.

This encyclopedia is the first to offer in-depth coverage of imaging science and technology from a diverse range of applications, techniques and fields of study. Today imaging is used by astronomers to map distant galaxies, oceanographers to map the sea floor, chemists to map the distribution of atoms on a surface, physicians to map the functionality of the brain and electrical engineers to map electromagnetic fields around power lines. With this encyclopedia, scientists, engineers and physicians can understand more about the science and technology behind the imaging techniques they are currently using and learn the latest technologies. Diverse coverage offers the ability to learn from applications in archeology, aviation, astronomy, chemistry, forensics, geography, mathematics, medicine, meteorology, microscopy, oceanography, surveillance and more ... and how to apply those imaging solutions to many different problems. Also available in a user-friendly, online edition The new electronic version of the Encyclopedia, accessible through Wiley InterScience, offers enhanced browsing, searching and cross-referencing capabilities. Visit www.interscience.wiley.com/eist

Atom Smashing, Food Chemistry, Animals, Space, and More!

Science Encyclopedia

The Encyclopedia of Seeds

Encyclopedia of Science, Technology, and Ethics

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When asking the question what is wine? there are various ways to answer. Wine is extolled as a food, a social lubricant, an antimicrobial and antioxidant, and a product of immense economic significance. But there is more to it than that. When did humans first start producing wine and what are its different varieties? Are wines nutritious or have any therapeutic values—do they have any role in health or are they simply intoxicating beverages? How are their qualities determined or marketed and how are these associated with tourism? Concise Encyclopedia of Science and Technology of Wine attempts to answer all these questions and more. This book reveals state-of-the-art technology of winemaking, describing various wine regions of the world and different cultivars used in winemaking. It examines microbiology, biochemistry, and engineering in the context of wine production. The sensory qualities of wine and brandy are explored, and the composition, nutritive and therapeutic values, and toxicity are summarized. Selected references at the end of each chapter provide ample opportunity for additional study. Key Features: Elaborates on the recent trends of control and modeling of wine and the techniques used in the production of different wines and brandies Focuses on the application of biotechnology, especially genetic engineering of yeast, bioreactor technological concepts, enzymology, microbiology, killer yeast, stuck and sluggish fermentation, etc. Illustrates the biochemical basis of wine production including malolactic fermentation Examines marketing, tourism, and the present status of the wine industry Concise Encyclopedia of Science and Technology of Wine contains the most comprehensive, yet still succinct, collection of information on the science and technology of winemaking. With 45 chapters contributed by leading experts in their fields, it is an indispensable treatise offering extensive details of the processes of winemaking. The book is an incomparable resource for oenologists, food scientists, biotechnologists, postharvest technologists, biochemists, fermentation technologists, nutritionists, chemical engineers, microbiologists, toxicologists, organic chemists, and the undergraduate and postgraduate students of these disciplines.

This 5,800-page encyclopedia surveys 100 generations of great thinkers, offering more than 2,000 detailed biographies of scientists, engineers, explorers and inventors who left their mark on the history of science and technology. This six-volume masterwork also includes 380 articles summarizing the time-line of ideas in the leading fields of science, technology, mathematics and philosophy.

The explosion of scientific information is exacerbating the information gap between richer/poorer, educated/less-educated publics. The proliferation of media technology and the popularity of the Internet help some keep up with these developments but also make it more likely others fall further behind. This is taking place in a globalizing economy and society that further complicates the division between information haves and have-nots and compounds the challenge of communicating about emerging science and technology to increasingly diverse audiences. Journalism about science and technology must fill this gap, yet journalists and journalism students themselves struggle to keep abreast of contemporary scientific developments. Scientist - aided by public relations and public information professionals - must get their stories out, not only to other scientists but also to broader public audiences. Funding agencies increasingly expect their grantees to engage in outreach and education, and such activity can be seen as both a survival strategy and an ethical imperative for taxpayer-supported, university-based research. Science communication, often in new forms, must expand to meet all these needs. Providing a comprehensive introduction to students, professionals and scholars in this area is a unique challenge because practitioners in these fields must grasp both the principles of science and the principles of science communication while understanding the social contexts of each. For this reason, science journalism and science communication are often addressed only in advanced undergraduate or graduate specialty courses rather than covered exhaustively in lower-division courses. Even so, those entering the field rarely will have a comprehensive background in both science and communication studies. This circumstance underscores the importance of compiling useful reference materials. The Encyclopedia of Science and Technology Communication presents resources and strategies for science communicators, including theoretical material and background on recent controversies and key institutional actors and sources. Science communicators need to understand more than how to interpret scientific facts and conclusions; they need to understand basic elements of the politics, sociology, and philosophy of science, as well as relevant media and communication theory, principles of risk communication, new trends, and how to evaluate the effectiveness of science communication programmes, to mention just a few of the major challenges. This work will help to develop and enhance such understanding as it addresses these challenges and more. Topics covered include: advocacy, policy, and research organizations environmental and health communication philosophy of science media theory and science communication informal science education science journalism as a profession risk communication theory public understanding of science pseudo-science in the news special problems in reporting science and technology science communication ethics.

Provides information on a variety of topics relating to the ethics of science and technology.

The Fast Facts Encyclopedia of Science & Technology

Encyclopedia of Computer Science and Technology

Encyclopedia of Imaging Science and Technology, 2 Volume Set

Encyclopedia of Sustainability Science and Technology

The Kingfisher Science Encyclopedia

Learn about great inventions, space travel, the human body, steam engines, and much, much more.

Encyclopedia of Sustainable Technologies provides an authoritative assessment of the sustainable technologies that are currently available or in development. Sustainable technology includes the scientific understanding, development and application of a wide range of technologies and processes and their environmental implications. Systems and lifecycle analyses of energy systems, environmental management, agriculture, manufacturing and digital technologies provide a comprehensive method for understanding the full sustainability of processes. In addition, the development of clean processes through green chemistry and engineering techniques are also described. The book is the first multi-volume reference work to employ both Life Cycle Analysis (LCA) and Triple Bottom Line (TBL) approaches to assessing the wide range of technologies available and their impact upon the world. Both approaches are long established and widely recognized, playing a key role in the organizing principles of this valuable work. Provides readers with a one-stop guide to the most current research in the field Presents a grounding of the fundamentals of the field of sustainable technologies Written by international leaders in the field, offering comprehensive coverage of the field and a consistent, high-quality scientific standard Includes the Life Cycle Analysis and Triple Bottom Line approaches to help users understand and assess sustainable technologies

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Encyclopedia of Science and TechnologyTaylor & Francis

Science, Technology, and Society

McGraw-Hill Encyclopedia of Science & Technology

Concise Encyclopedia of Science and Technology of Wine

Encyclopedia of Information Science and Technology

Van Nostrand's Scientific Encyclopedia, 2 Volume Set

Offers an illustrated encyclopedia of general science, with informative and fun facts on a broad array of scientific topics.

With breadth and depth of coverage, the Encyclopedia of Computer Science and Technology, Second Edition has a multi-disciplinary scope, drawing together comprehensive coverage of the inter-related aspects of computer science and technology. The topics covered in this encyclopedia include: General and reference Hardware Computer systems organization Networks Software and its engineering Theory of computation Mathematics of computing Information systems Security and privacy Human-centered computing Computing methodologies Applied computing Professional issues Leading figures in the history of computer science The encyclopedia is

structured according to the ACM Computing Classification System (CCS), first published in 1988 but subsequently revised in 2012. This classification system is the most comprehensive and is considered the de facto ontological framework for the computing field. The encyclopedia brings together the information and historical context that students, practicing professionals, researchers, and academicians need to have a strong and solid foundation in all aspects of computer science and technology.

The A-to-Z reference resource for nuclear energy information A significant milestone in the history of nuclear technology, Nuclear Energy Encyclopedia: Science, Technology, and Applications is a comprehensive and authoritative reference guide written by a committee of the world's leading energy experts. The encyclopedia is packed with cutting-edge information about where nuclear energy science and technology came from, where they are today, and what the future may hold for this vital technology. Filled with figures, graphs, diagrams, formulas, and photographs, which accompany the short, easily digestible entries, the book is an accessible reference work for anyone with an interest in nuclear energy, and includes coverage of safety and environmental issues that are particularly topical in light of the Fukushima Daiichi incident. A definitive work on all aspects of the world's energy supply, the Nuclear Energy Encyclopedia brings together decades of knowledge about energy sources and technologies ranging from coal and oil, to biofuels and wind, and ultimately nuclear power. The Encyclopedia of Color Science and Technology provides an authoritative single source for understanding and applying the concepts of color to all fields of science and technology, including artistic and historical aspects of color. Many topics are discussed in this timely reference, including an introduction to the science of color, and entries on the physics, chemistry and perception of color. Color is described as it relates to optical phenomena of color and continues on through colorants and materials used to modulate color and also to human vision of color. The measurement of color is provided as is colorimetry, color spaces, color difference metrics, color appearance models, color order systems and cognitive color. Other topics discussed include industrial color, color imaging, capturing color, displaying color and printing color. Descriptions of color encodings, color management, processing color and applications relating to color synthesis for computer graphics are included in this work. The Encyclopedia also delves into color as it applies to other domains such as art and design - ie - color design, color harmony, color palettes, color and accessibility, researching color deficiency, and color and data visualization. There is also information on color in art conservation, color and architecture, color and educations, color and culture, and an overview of the history of color and comments on the future of color. This unique work will extend the influence of color to a much wider audience than has been possible to date.

Technical Innovation in American History: An Encyclopedia of Science and Technology [3 volumes]

Science, Technology and Uses

Encyclopedia of Color Science and Technology

Encyclopedia of Pharmaceutical Science and Technology, Fourth Edition, Six Volume Set (Print)

Historical Encyclopedia of Natural and Mathematical Sciences

This Encyclopedia begins with an introduction summarizing its scope and content. Glassmaking: Structure of Glass, Glass Physics, Transport Properties, Chemistry of Glass, Glass and Light, Inorganic Glass Families, Organic Glasses, Glass and the Environment, Historical and Economical Aspect of Glassmaking, History of Glass, Glass and Art, and outline possible new developments and uses as presented by the best known people in the field (C.A. Angell, for example). Sections and chapters are arranged in a logical order to ensure overall consistency and avoid useless repetitions. All sections are introduced by a brief introduction and attractive illustration. Newly investigated topics will be addressed, with the goal of ensuring that this Encyclopedia remains a reference work for years to come.

Presents an illustrated A-Z encyclopedia containing approximately 600 entries on computer and technology related topics.

Medieval Science, Technology, and Medicine details the whole scope of scientific knowledge in the medieval period in more than 300 A to Z entries. This resource discusses the research, application of knowledge, cultural and technology exchanges, experimentation, and achievements in the many disciplines related to science and technology. Coverage includes inventions, discoveries, concepts, places and fields of study, regions, and significant contributors to various fields of science. There are also entries on South-Central and East Asian science. This reference work provides an examination of medieval scientific tradition as well as an appreciation for the relationship between medieval science and the traditions it supplanted and those that replaced it. For a full list of entries, contributors, and more, visit the Routledge Encyclopedias of the Middle Ages website.

The Encyclopedia of Sustainability Science and Technology (ESST) addresses the grand challenge for science and engineering today. It provides unprecedented, peer-reviewed coverage in more than 550 separate entries comprising 38 topical sections. ESST establishes a foundation for the many sustainability and policy evaluations being performed in institutions worldwide. An indispensable resource for scientists and engineers in developing new technologies and for applying existing technologies to sustainability, the Encyclopedia of Sustainability Science and Technology is presented at the university and professional level needed for scientists, engineers, and their students to support real progress in sustainability science and technology. Although the emphasis is on science and technology rather than policy, the Encyclopedia of Sustainability Science and Technology is also a comprehensive and authoritative resource for policy makers who want to understand the scope of research and development and how these bottom-up innovations map on to the sustainability challenge.

Encyclopedia of Glass Science, Technology, History, and Culture Two Volume Set

Encyclopedia of Science and Technology

The Primary Science and Technology Encyclopedia

The Encyclopedia of Science, Technology, and Society: O-Z

Pharmaceutical science deals with the whole spectrum of drug development from start to finish. There are many different facets to the pharmaceutical industry, from initial research to the finished product, including the equipment used, regulations that must be followed. Presenting an overview of all of these different aspects, the Encyclopedia of Pharmaceutical Science and Technology, Fourth Edition is a must-have reference guide for all laboratories and libraries in the field. Bringing together leaders from every specialty related to pharmaceutical science and technology, this is the single-source reference at the forefront of pharmaceutical R&D. The strength of this work is not only its breadth but also the caliber of the experts in their field, writing on all aspects of pharmaceutical science and technology. The fourth edition offers 29 new chapters ranging from biomarkers, computational chemistry, and contamination control to high-throughput screening, quality by design. The encyclopedia details best practices of equipment used, methods for manufacturing, options for packaging, and routes for drug delivery. The volumes also provide a thorough understanding of the choices behind equipment, regulations, safety aspects, patent guidance, and methods of analysis are presented. Key Areas Covered: Analytics Biomarkers Dosage forms Drug delivery Formulation Informatics Manufacturing Packaging Processing Regulatory affairs Systems and more. This is an authoritative reference source for those practicing in any area of pharmaceutical science and technology, enabling the pharmaceutical specialist and novice alike to keep abreast of developments in this constantly evolving and highly competitive industry. A new print edition is in the works. A new online version coming soon. Contact us to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367 / (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062 / (E-mail) online