Handbook Of Nuclear Engineering 5 Vol Set

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Charged Particle Traps - Fouad G. Major 2005
This book provides an introduction and guide to modern advances in charged particle (and antiparticle) confinement by electromagnetic fields. Confinement in different trap geometries, the influence of trap imperfections, classical and quantum mechanical description of the trapped particle motion, different methods of ion cooling to low temperatures, and non-neutral plasma properties (including Coulomb crystals) are the main subjects. They form the basis of such applications of charged particle traps as high-resolution optical and microwave spectroscopy, mass spectrometry, atomic clocks, and, potentially, quantum computing.
Handbook of Nuclear Chemistry - Attila Vértes 2010-12-10
This revised and extended 6 volume handbook set is the most comprehensive and voluminous reference work of its kind in the field of nuclear chemistry. The Handbook set covers all of the chemical aspects of nuclear science starting from the physical basics and including such diverse areas as the chemistry of transactinides and exotic atoms as well as radioactive waste management and radiopharmaceutical chemistry relevant to nuclear medicine. The nuclear methods of the investigation of chemical structure also receive ample space and attention. The international team of authors consists of scores of world-renowned experts - nuclear chemists, radiopharmaceutical chemists and physicists - from Europe, USA, and Asia. The Handbook set is an invaluable reference for nuclear scientists, biologists, chemists, physicists, physicians practicing nuclear medicine, graduate students and teachers - virtually all who are involved in the chemical and radiopharmaceutical aspects of nuclear science. The Handbook set also provides further reading via the rich selection of references.
Selected Readings on Atomic Energy - U.S. Atomic Energy Commission 1958

Nuclear Engineering Handbook - Kenneth D. Kok 2016-10-03
Building upon the success of the first edition, the Nuclear Engineering Handbook, Second Edition, provides a comprehensive, up-to-date overview of nuclear power engineering. Consisting of chapters written by leading experts, this volume spans a wide range of topics in the areas of nuclear power reactor design and operation, nuclear fuel cycles, and radiation detection. Plant safety issues are addressed, and the economics of nuclear power generation in the 21st century are presented. The Second Edition also includes full coverage of Generation IV reactor designs, and new information on MRS technologies, small modular reactors, and fast reactors.
Patty's Toxicology, 6 Volume Set - Eula Bingham 2012-07-31
Featuring the improved format used in the 5th edition, this updated set presents, in logical groupings, comprehensive toxicological data for industrial compounds, including CAS numbers, physical and chemical properties, exposure limits, and biological tolerance values for occupational exposures, making it essential for toxicologists and industrial hygienists. This edition has about 40% new authors who have brought a new and international perspective to interpreting industrial toxicology, and discusses new subjects such as nanotechnology, flavorings and the food industry, reactive chemical control to comprehensive chemical policy, metalworking fluids, and pharmaceuticals.
Doe Fundamentals Handbook Nuclear Physics and Reactor Theory - Volume 1 of 2 - U. S. Department Of Energy 2013

Encyclopedia of Environmental Management, Four Volume Set - Sven Erik Jorgensen 2012-12-13
Winner of an Outstanding Academic Title Award from CHOICE Magazine Encyclopedia of Environmental Management gives a comprehensive overview of environmental problems, their sources, their assessment, and their solutions. Through in-depth entries and a topical table of contents, readers will quickly find answers to questions about specific pollution and management issues. Edited by the esteemed Sven Erik Jørgensen and an advisory board of renowned specialists, this four-volume set shares insights from more than 500 contributors—all experts in their fields. The encyclopedia provides basic knowledge for an integrated and ecologically sound management system. Nearly 400 alphabetical entries cover everything from air, soil, and water pollution to agriculture, energy, global pollution, toxic substances, and general pollution problems. Using a topical table of contents, readers can also search for entries according to the type of problem and the methodology. This allows readers to see the overall picture at a glance and find answers to the core questions: What is the pollution problem, and what are its sources? What is the "big picture," or what background knowledge do we need? How can we diagnose the problem, both qualitatively and quantitatively, using monitoring and ecological models, indicators, and services? How can we solve the problem with environmental technology, ecotechnology, cleaner technology, and environmental legislation? How do we address the problem as part of an integrated management strategy? This accessible encyclopedia examines the entire spectrum of tools available for environmental management. An indispensable resource, it guides environmental managers to find the best possible solutions to the myriad pollution problems they face. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact us to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367 / (email) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062 / (email) online.sales@tandf.co.uk
Handbook of Generation IV Nuclear Reactors - Igor Pioro 2016-06-09
Handbook of Generation IV Nuclear Reactors presents information on the current fleet of Nuclear Power Plants (NPPs) with water-cooled reactors (Generation III and III+) (96% of 430 power reactors in the world) that have relatively low thermal efficiencies (within the range of 32 36%) compared to those of modern advanced thermal power plants (combined cycle gas-fired power plants – up to 62% and supercritical pressure coal-fired power plants – up to 55%). Moreover, thermal efficiency of the current fleet of NPPs with water-cooled reactors cannot be increased significantly without completely different innovative designs, which are Generation IV reactors. Nuclear power is vital for generating electrical energy without carbon emissions. Complete with the latest research, development, and design, and written by an international team of experts, this handbook is completely dedicated to Generation IV reactors. Presents the first comprehensive handbook dedicated entirely to generation IV nuclear reactors Reviews the latest trends and developments Complete with the latest research, development, and design information in generation IV nuclear reactors Written by an international team of experts in the field
On Solar Hydrogen and Nanotechnology - Lionel Vayssieres 2010-01-26
More energy from the sun strikes Earth in an hour than is consumed by humans in an entire year. Efficiently harnessing solar power for sustainable generation of hydrogen requires low-cost, purpose-built, functional materials combined with inexpensive large-scale manufacturing methods. These issues are comprehensively addressed in On Solar Hydrogen & Nanotechnology – an authoritative, interdisciplinary source of fundamental and applied knowledge in all areas related to solar hydrogen. Written by leading experts, the book emphasizes state-of-the-art materials and characterization techniques as well as the impact of nanotechnology on this cutting edge field. Addresses the current status and prospects of solar hydrogen, including major achievements, performance benchmarks, technological limitations,

and crucial remaining challenges Covers the latest advances in fundamental understanding and development in photocatalytic reactions, semiconductor nanostructures and heterostructures, quantum confinement effects, device fabrication, modeling, simulation, and characterization techniques as they pertain to solar generation of hydrogen Assesses and establishes the present and future role of solar hydrogen in the hydrogen economy Contains numerous graphics to illustrate concepts, techniques, and research results On Solar Hydrogen & Nanotechnology is an essential reference for materials scientists, physical and inorganic chemists, electrochemists, physicists, and engineers carrying out research on solar energy, photocatalysis, or semiconducting nanomaterials, both in academia and industry. It is also an invaluable resource for graduate students and postdoctoral researchers as well as business professionals and consultants with an interest in renewable energy.
Books in Print Supplement - 1984

Handbook of Fuel Cells, 6 Volume Set - Wolf Vielstich 2009-09-21
This six volume set brings together for the first time in a single reference work the fundamentals, principles and the current state-of-the-art in fuel cells. Its publication reflects the increasing importance and the rapidly growing rate of research into alternative, clean sources of energy. With internationally renowned editors, advisory board members, and contributors from academia and industry, it guides the reader from the foundations and fundamental principles through to the latest technology and cutting-edge applications, ensuring a logical, consistent approach to the subject. The Handbook is divided into four main themes: Volume 1: "Fundamentals and Survey of Systems" Volume 2: "Fuel Cell Electrocatalysis" Volumes 3 and 4: "Fuel Cell Technology and Applications" Volumes 5 and 6: "Advances in Electrocatalysis, Materials, Diagnostics and Durability"
Handbook of Nuclear Engineering - Dan Gabriel Cacuci 2010-09-14
This is an authoritative compilation of information regarding methods and data used in all phases of nuclear engineering. Addressing nuclear engineers and scientists at all levels, this book provides a condensed reference on nuclear engineering since 1958.
Guide to the Atoms for Peace Document Collection - U.S. Atomic Energy Commission Technical Information Service 1956

Radiation Shielding - J. Kenneth Shultis 1996
3 Mile Island. Chernobyl. Nuclear meltdowns that can spell disaster for decades to come. For a number of professions including nuclear engineering, environmental engineering, radiology, and space physics, the most hazardous aspect of the job is the proper handling of radioactive material and the assessment of radiation doses. This book provides an understanding of the principles and techniques used in modern radiation shield design and analysis.
Handbook of Nuclear Medicine and Molecular Imaging for Physicists - Michael Ljungberg 2022-01-24
This state-of-the-art handbook, the first in a series that provides medical physicists with a comprehensive overview into the field of nuclear medicine, is dedicated to instrumentation and imaging procedures in nuclear medicine. It provides a thorough treatment on the cutting-edge technologies being used within the field, in addition to touching upon the history of their use, their development, and looking ahead to future prospects. This text will be an invaluable resource for libraries, institutions, and clinical and academic medical physicists searching for a complete account of what defines nuclear medicine. The most comprehensive reference available providing a state-of-the-art overview of the field of nuclear medicine Edited by a leader in the field, with contributions from a team of experienced medical physicists Includes the latest practical research in the field, in addition to explaining fundamental theory and the field's history
Comprehensive Nuclear Materials - 2020-07-22
Materials in a nuclear environment are exposed to extreme conditions of radiation, temperature and/or corrosion, and in many cases the combination of these makes the material behavior very different from conventional materials. This is evident for the four major technological challenges the nuclear technology domain is facing currently: (i) long-term operation of existing Generation II nuclear power plants, (ii) the design of the next generation reactors (Generation IV), (iii) the construction of the ITER fusion reactor in Cadarache (France), (iv) and the intermediate and final disposal of nuclear waste. In order to address these challenges, engineers and designers need to know the properties of a wide variety of materials under these conditions and to understand the underlying processes affecting changes in their behavior, in order to assess their performance and to determine the limits of operation. Comprehensive Nuclear Materials 2e provides broad ranging, validated summaries of all the major topics in the field of nuclear material research for fission as well as fusion reactor systems. Attention is given to the fundamental scientific aspects of nuclear materials: fuel and structural materials for fission reactors, waste materials, and materials for fusion reactors. The articles are written at a level that allows undergraduate students to understand the material, while providing active researchers with a ready reference resource of information. Most of the chapters from the first Edition have been revised and updated and a significant number of new topics are covered in completely new material. During the ten years between the two editions, the challenge for applications of nuclear materials has been significantly impacted by world events, public awareness, and technological innovation. Materials play a key role as enablers of new technologies, and we trust that this new edition of Comprehensive Nuclear Materials has captured the key recent developments. Critically reviews the major classes and functions of materials, supporting the selection, assessment, validation and engineering of materials in extreme nuclear environments Comprehensive resource for up-to-date and authoritative information which is not always available elsewhere, even in journals Provides an in-depth treatment of materials modeling and simulation, with a specific focus on nuclear issues Serves as an excellent entry point for students and researchers new to the field
Heat Exchanger Design - Arthur P. Fraas 1991-01-16
This Second Edition of the well-received work on design, construction, and operation of heat exchangers. Demonstrates how to apply theories of fluid mechanics and heat transfer to practical problems posed by design, testing, and installation of heat exchangers. Tables and data have been brought up to date, and there is new material on problems of vibration and fouling, and on optimization of energy use in the chemical process and manufacturing industries. Covers all basic principles of heat exchanger design, and addresses many specialized situations encountered in engineering applications.
A Student Guide to Energy - John F. Mongillo 2011-05-04
This multivolume resource is an excellent research tool for developing a working knowledge of basic energy concepts and topics. * Includes interviews of teachers, students, and businesspeople in the renewable energy fields * Provides energy timelines charting the historic development of different energy sources * Offers 150 detailed Illustrations of electric vehicles and hydrogen fuel cells plus 50 tables, and charts of data * Presents a number of maps showing the global development of wind power, solar power, and geothermal power * A bibliography of print and online resources is included for further reading
Nuclear Energy - Raymond LeRoy Murray 1988

Handbook of Physics - Walter Benenson 2006-01-13
Handbook of Physics is a veritable toolbox for rapid access to a wealth of physics information for everyday use in problem solving, homework, and examinations. This complete reference includes not only the fundamental formulas of physics but also experimental methods used in practice.
Hans Bethe: Prophet Energy - Jeremy Bernstein 1980-10-30

The Future of Nuclear Power - G. Greenhalgh 1989-01-31

Handbook of Nuclear Engineering - Dan Gabriel Cacuci 2010-11-10
The Handbook of Nuclear Engineering is an authoritative compilation of information regarding methods and data used in all phases of nuclear engineering. Addressing nuclear engineers and scientists at all academic levels, this five volume set provides the latest findings in nuclear data and experimental techniques, reactor physics, kinetics, dynamics and control. Readers will also find a detailed description of data assimilation, model validation and calibration, sensitivity and uncertainty analysis, fuel management and cycles, nuclear reactor types and radiation shielding. A discussion of radioactive waste disposal, safeguards and non-proliferation, and fuel processing with partitioning and transmutation is also included. As nuclear technology becomes an important resource of non-polluting sustainable energy in the future, The Handbook of Nuclear Engineering is an excellent reference for practicing engineers, researchers and professionals.
Nuclear Power and Its Environmental Effects - Samuel Glasstone 1980
From the mining of uranium to the disposal of waste products, the production of nuclear power has unique environmental effects. In Nuclear Power and Its Environmental Effects, authors have described

these effects and necessary safety measures in the hope of placing them in perspective for the general public, which must have understandable data.

Handbook of Nuclear Chemistry - Attila Vértes 2003

Impressive in its overall size and scope, this five-volume reference work provides researchers with the tools to push them into the forefront of the latest research. The Handbook covers all of the chemical aspects of nuclear science starting from the physical basics and including such diverse areas as the chemistry of transactinides and exotic atoms as well as radioactive waste management and radiopharmaceutical chemistry relevant to nuclear medicine. The nuclear methods of the investigation of chemical structure also receive ample space and attention. The international team of authors consists of 77 world-renowned experts - nuclear chemists, radiopharmaceutical chemists and physicists - from Austria, Belgium, Germany, Great Britain, Hungary, Holland, Japan, Russia, Sweden, Switzerland and the United States. The Handbook is an invaluable reference for nuclear scientists, biologists, chemists, physicists, physicians practicing nuclear medicine, graduate students and teachers - virtually all who are involved in the chemical and radiopharmaceutical aspects of nuclear science. The Handbook also provides for further reading through its rich selection of references.

Handbook of Small Modular Nuclear Reactors - Daniel T. Ingersoll 2020-10-22

Handbook of Small Modular Nuclear Reactors, Second Edition is a fully updated comprehensive reference on Small Modular Reactors (SMRs), which reflects the latest research and technological advances in the field from the last five years. Editors Daniel T. Ingersoll and Mario D. Carelli, along with their team of expert contributors, combine their wealth of collective experience to update this comprehensive handbook that provides the reader with all required knowledge on SMRs, expanding on the rapidly growing interest and development of SMRs around the globe. This book begins with an introduction to SMRs for power generation, an overview of international developments, and an analysis of Integral Pressurized Water Reactors as a popular class of SMRs. The second part of the book is dedicated to SMR technologies, including physics, components, I&C, human-system interfaces and safety aspects. Part three discusses the implementation of SMRs, covering economic factors, construction methods, hybrid energy systems and licensing considerations. The fourth part of the book provides an in-depth analysis of SMR R&D and deployment of SMRs within eight countries, including the United States, Republic of Korea, Russia, China, Argentina, and Japan. This edition includes brand new content on the United Kingdom and Canada, where interests in SMRs have increased considerably since the first edition was published. The final part of the book adds a new analysis of the global SMR market and concludes with a perspective on SMR benefits to developing economies. This authoritative and practical handbook benefits engineers, designers, operators, and regulators working in nuclear energy, as well as academics and graduate students researching nuclear reactor technologies. Presents the latest research on SMR technologies and global developments Includes new case study chapters on the United Kingdom and Canada and a chapter on global SMR markets Discusses new technologies such as floating SMRs and molten salt SMRs

Fundamentals of Nuclear Science and Engineering Second Edition - J. Kenneth Shultis 2007-09-07

Since the publication of the bestselling first edition, there have been numerous advances in the field of nuclear science. In medicine, accelerator based teletherapy and electron-beam therapy have become standard. New demands in national security have stimulated major advances in nuclear instrumentation.An ideal introduction to the fundamentals of nuclear science and engineering, this book presents the basic nuclear science needed to understand and quantify an extensive range of nuclear phenomena. New to the Second Edition— A chapter on radiation detection by Douglas McGregor Up-to-date coverage of radiation hazards, reactor designs, and medical applications Flexible organization of material that allows for quick reference This edition also takes an in-depth look at particle accelerators, nuclear fusion reactions and devices, and nuclear technology in medical diagnostics and treatment. In addition, the author discusses applications such as the direct conversion of nuclear energy into electricity. The breadth of coverage is unparalleled, ranging from the theory and design characteristics of nuclear reactors to the identification of biological risks associated with ionizing radiation. All topics are supplemented with extensive nuclear data compilations to perform a wealth of calculations. Providing extensive coverage of physics, nuclear science, and nuclear technology of all types, this up-to-date second edition of Fundamentals of Nuclear Science and Engineering is a key reference for any physicists or engineer.

Handbooks and Tables in Science and Technology - Russell H. Powell 1994

Provides a bibliography of more than three thousand handbooks in various aspects of science and technology, from abrasives and band structures to yield strength and zero defects

University Science and Engineering Libraries, Their Operation, Collections, and Facilities - Ellis Mount 1975

Nuclear Power - Walter C. Patterson 1983

Handbook of Clean Energy Systems, 6 Volume Set - Jinyue Yan 2015-06-22

The Handbook of Clean Energy Systems brings together an international team of experts to present a comprehensive overview of the latest research, developments and practical applications throughout all areas of clean energy systems. Consolidating information which is currently scattered across a wide variety of literature sources, the handbook covers a broad range of topics in this interdisciplinary research field including both fossil and renewable energy systems. The development of intelligent energy systems for efficient energy processes and mitigation technologies for the reduction of environmental pollutants is explored in depth, and environmental, social and economic impacts are also addressed. Topics covered include: Volume 1 - Renewable Energy: Biomass resources and biofuel production; Bioenergy Utilization; Solar Energy; Wind Energy; Geothermal Energy; Tidal Energy. Volume 2 - Clean Energy Conversion Technologies: Steam/Vapor Power Generation; Gas Turbines Power Generation; Reciprocating Engines; Fuel Cells; Cogeneration and Polygeneration. Volume 3 - Mitigation Technologies: Carbon Capture; Negative Emissions System; Carbon Transportation; Carbon Storage; Emission Mitigation Technologies; Efficiency Improvements and Waste Management; Waste to Energy. Volume 4 - Intelligent Energy Systems: Future Electricity Markets; Diagnostic and Control of Energy Systems; New Electric Transmission Systems; Smart Grid and Modern Electrical Systems; Energy Efficiency of Municipal Energy Systems; Energy Efficiency of Industrial Energy Systems; Consumer Behaviors; Load Control and Management; Electric Car and Hybrid Car; Energy Efficiency Improvement. Volume 5 - Energy Storage: Thermal Energy Storage; Chemical Storage; Mechanical Storage; Electrochemical Storage; Integrated Storage Systems. Volume 6 - Sustainability of Energy Systems: Sustainability Indicators, Evaluation Criteria, and Reporting; Regulation and Policy; Finance and Investment; Emission Trading; Modeling and Analysis of Energy Systems; Energy vs. Development; Low Carbon Economy; Energy Efficiencies and Emission Reduction. Key features: Comprising over 3,500 pages in 6 volumes, HCES presents a comprehensive overview of the latest research, developments and practical applications throughout all areas of clean energy systems, consolidating a wealth of information which is currently scattered across a wide variety of literature sources. In addition to renewable energy systems, HCES also covers processes for the efficient and clean conversion of traditional fuels such as coal, oil and gas, energy storage systems, mitigation technologies for the reduction of environmental pollutants, and the development of intelligent energy systems. Environmental, social and economic impacts of energy systems are also addressed in depth. Published in full colour throughout. Fully indexed with cross referencing within and between all six volumes. Edited by leading researchers from academia and industry who are internationally renowned and active in their respective fields. Published in print and online. The online version is a single publication (i.e. no updates), available for one-time purchase or through annual subscription.

Encyclopedia of Software Engineering Three-Volume Set (Print) - Phillip A. Laplante 2010-11-22

Software engineering requires specialized knowledge of a broad spectrum of topics, including the construction of software and the platforms, applications, and environments in which the software operates as well as an understanding of the people who build and use the software. Offering an authoritative perspective, the two volumes of the Encyclopedia of Software Engineering cover the entire multidisciplinary scope of this important field. More than 200 expert contributors and reviewers from industry and academia across 21 countries provide easy-to-read entries that cover software requirements, design, construction, testing, maintenance, configuration management, quality control, and

software engineering management tools and methods. Editor Phillip A. Laplante uses the most universally recognized definition of the areas of relevance to software engineering, the Software Engineering Body of Knowledge (SWEBOK®), as a template for organizing the material. Also available in an electronic format, this encyclopedia supplies software engineering students, IT professionals, researchers, managers, and scholars with unrivaled coverage of the topics that encompass this ever-changing field. Also Available Online This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact Taylor and Francis for more information or 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.sales@tandf.co.uk

Nuclear Power - Rowland F. Pocock 1977

Problems of Nuclear Science and Technology - Andranik Melkonovich Petros'iants 1980

Nuclear Science Abstracts - 1974

Nuclear Power Plant Systems and Equipment - Kenneth C. Lish 1972

A Student Guide to Energy [5 volumes] - John F. Mongillo 2011-05-04

This multivolume resource is an excellent research tool for developing a working knowledge of basic energy concepts and topics. • Includes interviews of teachers, students, and businesspeople in the renewable energy fields • Provides energy timelines charting the historic development of different energy sources • Offers 150 detailed Illustrations of electric vehicles and hydrogen fuel cells plus 50 tables, and charts of data • Presents a number of maps showing the global development of wind power, solar power, and geothermal power • A bibliography of print and online resources is included for further reading

Plutonium - Frank von Hippel 2019-12-23

This book provides a readable and thought-provoking analysis of the issues surrounding nuclear fuel reprocessing and fast-neutron reactors, including discussion of resources, economics, radiological risk and resistance to nuclear proliferation. It describes the history and science behind reprocessing, and gives an overview of the status of reprocessing programmes around the world. It concludes that such programs should be discontinued. While nuclear power is seen by many as the only realistic solution to the carbon emission problem, some national nuclear establishments have been pursuing development and deployment of sodium-cooled plutonium breeder reactors, and plutonium recycling. Its proponents argue that this system would offer significant advantages relative to current light water reactor technology in terms of greater uranium utilization efficiency, and that separating out the long-lived plutonium and other transuranics from spent fuel and fissioning them in fast reactors would greatly reduce the duration of the toxicity of radioactive waste. However, the history of efforts to deploy this system commercially in a number of countries over the last six decades has been one of economic and technical failure and, in some cases, was used to mask clandestine nuclear weapon development programs. Covering topics of significant public interest including nuclear safety, fuel storage, environmental impact and the spectre of nuclear terrorism, this book presents a comprehensive analysis of the issue for nuclear engineers, policy analysts, government officials and the general public. "Frank von Hippel, Jungmin Kang, and Masafumi Takubo, three internationally renowned nuclear experts, have done a valuable service to the global community in putting together this book, which both historically and comprehensively covers the “plutonium age” as we know it today. They articulate in a succinct and clear manner their views on the dangers of a plutonium economy and advocate a ban on the separation of plutonium for use in the civilian fuel cycle in view of the high proliferation and nuclear-security risks and lack of economic justification." (Mohamed ElBaradei, Director General, International Atomic Energy Agency (1997-2009), Nobel Peace Prize (2005)) "The 1960s dream of a ‘plutonium economy’ has not delivered abundant low-cost energy, but instead has left the world a radioactive legacy of nuclear weapons proliferation and the real potential for nuclear terrorism. Kang, Takubo, and von Hippel explain with power and clarity what can be done to reduce these dangers. The governments of the remaining countries whose nuclear research and development establishments are still pursuing the plutonium dream should pay attention.” (Senator Edward Markey, a leader in the US nuclear-disarmament movement as a member of Congress since 1976) "The authors have done an invaluable service by putting together in one place the most coherent analysis of the risks associated with plutonium, and the most compelling argument for ending the practice of separating plutonium from spent fuel for any purpose. They have given us an easily accessible history of the evolution of thinking about the nuclear fuel cycle, the current realities of nuclear power around the world and, arguably most important, a clear alternative path to deal with the spent fuel arising from nuclear reactors for decades to centuries to come." (Robert Gallucci, Chief US negotiator with North Korea (1994); Dean, Georgetown University School of Foreign Service (1996-2009); President, MacArthur Foundation (2009-2014))

Nuclear Energy ebook Collection - Gianni Petrangeli 2008-09-05

Nuclear Energy ebook Collection contains 6 of our best-selling titles, providing the ultimate reference for every nuclear energy engineer’s library. Get access to over 3500 pages of reference material, at a fraction of the price of the hard-copy books. This CD contains the complete ebooks of the following 6 titles: Petrangeli, Nuclear Safety, 9780750667234 Murray, Nuclear Energy, 9780750671361 Bayliss, Nuclear Decommissioning, 9780750677448 Suppes, Sustainable Nuclear Power, 9780123706027 Lewis, Fundamentals of Nuclear Reactor Physics, 9780123706317 Kozima, The Science of the Cold Fusion Phenomenon, 9780080451107 *Six fully searchable titles on one CD providing instant access to the ULTIMATE library of engineering materials for nuclear energy professionals *3500 pages of practical and theoretical nuclear energy information in one portable package. *Incredible value at a fraction of the cost of the print books

Handbook of Radioactivity Analysis - Michael F. L'Annunziata 2020-03-03

Handbook of Radioactivity Analysis: Radiation Physics and Detectors, Volume One, and Radioanalytical Applications, Volume Two, Fourth Edition, is an authoritative reference on the principles, practical techniques and procedures for the accurate measurement of radioactivity - everything from the very low levels encountered in the environment, to higher levels measured in radioisotope research, clinical laboratories, biological sciences, radionuclide standardization, nuclear medicine, nuclear power, and fuel cycle facilities, and in the implementation of nuclear forensic analysis and nuclear safeguards. It includes sample preparation techniques for all types of matrices found in the environment, including soil, water, air, plant matter and animal tissue, and surface swipes. Users will find a detailed discussion of our current understanding of the atomic nucleus, nuclear stability and decay, nuclear radiation, and the interaction of radiation with matter relating to the best methods for radionuclide detection and measurement. Spans two volumes, Radiation Physics and Detectors and Radioanalytical Applications Includes a much-expanded treatment of calculations required in the measurement of radionuclide decay, energy of decay, nuclear reactions, radiation attenuation, nuclear recoil, cosmic radiation, and synchrotron radiation Includes the latest advances in liquid and solid scintillation analysis, alpha- and gamma spectrometry, mass spectrometric analysis, gas ionization and nuclear track analysis, and neutron detection and measurement Covers high-sample-throughput microplate techniques and multi-detector assay methods