

Uttarakhand Board 2013 Physics Paper

Edited by: Dr. Radwan A. Kharabsheh, The Hashemite University, Amman, Jordan. PRINT version of the proceedings of the International Conference on Innovation and Entrepreneurship ICIE 2013 hosted by The Hashemite University in cooperation with The Arab Administrative Development Organization, Amman, Jordan on the 4-5 March 2013. This is a single volume with 199 pages.

Having a solid understanding of materials recycling is of high importance, especially due to the growing use of composites in many industries and increasingly strict legislation and concerns about the disposal of composites in landfills or by incineration. Recycling of Plastics, Metals, and Their Composites provides a comprehensive review of the recycling of waste polymers and metal composites. It provides the latest advances and covers the fundamentals of recycled polymers and metal composites, such as preparation, morphology, and physical, mechanical, thermal, and flame-retardancy properties. FEATURES Offers a state-of-the-art review of the recycling of polymer composites and metal composites for sustainability Describes a life-cycle analysis to help readers understand the true potential value and market for these recycled materials Details potential applications of recycled polymer and metal composites Includes the performance of natural fiber-reinforced recycled thermoplastic polymer composites under aging conditions and the recycling of multi-material plastics Covers recycling technologies, opportunities, and challenges for polymer-matrix composites This book targets technical professionals in the metal and polymer industries as well as researchers, scientists, and advanced students. It is also of interest to decision makers at material suppliers, recycled metal and polymer product manufacturers, and governmental agencies working with recycled metal and polymer composites.

The field of plasmonics has shown extraordinary capabilities in realizing highly sensitive and accurate sensors for environmental monitoring and measurement of biological analytes. The inherent potential of such devices has led to growing interest worldwide in commercial fiber optic chemical and biosensors. Optical Sensors for Biomedical Diagnostics and Environmental Monitoring is an essential resource for students, established researchers, and industry developers in need of a reference work on both the fundamentals and latest advances in optical fiber sensor technology in biomedical diagnostics and environmental monitoring. The book includes rigorous theory and experimental techniques of surface plasmon and lossy mode resonances, as well as real-time sensing applications of resonance techniques implemented over optical fiber substrate using bulk layer and/or nanostructures as transducer and sensing layers. In addition, discussion of various design options for real-time sensors in environmental monitoring and biomedical diagnostics make the book approachable to readers from multidisciplinary fields.

The Government's commitment to increasing access to published research findings and its desire to achieve full open access are welcomed in this report from the Business, Innovation and Skills Committee. However, whilst Gold open access - where authors publish their articles in an open access journal that provides free immediate open access to all of its articles on the publisher's website - is a desirable ultimate goal, focusing on it during the transition to a fully open access world is a mistake. The Government and Research Council UK should reconsider their preference for Gold open access during the five year transition period, and give due regard to the evidence of the vital role that Green open access and repositories have to play as the UK moves towards full open access. (Authors opting for Green open access publish in any subscription journal, and then make their peer-reviewed final draft freely accessible online by self-archiving or depositing the article in a repository (either institutional or disciplinary) upon acceptance for publication.) Other recommendations include: promotion of standardisation and compliance across subject and institutional repositories; mitigation against the impact on universities of paying Article Processing Charges out of their own reserves; introduce a reduced VAT rate for e-journals; non-disclosure clauses should not be used in publishing contracts that include the use of public funds; BIS must review its consultation processes to ensure that lessons are learned from the lack of involvement of businesses, particularly SMEs, in the formation of open access policy

The primary goal of this book is to present the research findings and conclusions of physicists, economists, mathematicians and financial engineers working in the field of "Econophysics" who have undertaken agent-based modelling, comparison with empirical studies and related investigations. Most standard economic models assume the existence of the representative agent, who is "perfectly rational" and applies the utility maximization principle when taking action. One reason for this is the desire to keep models mathematically tractable: no tools are available to economists for solving non-linear models of heterogeneous adaptive agents without explicit optimization. In contrast, multi-agent models, which originated from statistical physics considerations, allow us to go beyond the prototype theories of traditional economics involving the representative agent. This book is based on the Econophys-Kolkata VII Workshop, at which many such modelling efforts were presented. In the book, leading researchers in their fields report on their latest work, consider recent developments and review the contemporary literature.

Volume 1 (A and B) of the Yearbook of International Organizations covers international organizations throughout the world, comprising their aims, activities and events The International Congress on Energy Efficiency and Energy Related Materials (ENEFM2013) was held on 9-12 October, 2013. This three-day congress focused on the latest developments of sustainable energy technologies, materials for sustainable energy applications and environmental & economic perspectives of energy. These proceedings include 63 peer reviewed technical papers, submitted from leading academic and research institutions from over 23 countries, representing some of the most cutting edge research available. The papers included were presented at the congress in the following sessions: General Issues Wind Energy Solar Energy Nuclear Energy Biofuels and

Bioenergy Energy Storage Energy Conservation and Efficiency Energy in Buildings Economical and Environmental Issues Environment Energy Requirements Economic Development Materials for Sustainable Energy Hydrogen Production and Storage Photovoltaic Cells Thermionic Converters Batteries and Superconductors Phase Change Materials Fuel Cells Superconductors

1. Chapterwise and Topicwise medical Entrance is a master collection of questions 2. The book contains last 17 years of question from various medical entrances 3. Chapterwise division and Topical Categorization is done according NCERT NEET Syllabus 4. Previous Years Solved Papers (2021-2005) are given in a Chapterwise manner. With ever changing pattern of examinations, it has become a paramount importance for students to be aware of the recent pattern and changes that are being made by the examination Board/Body. For an exam like NEET, it's even more important for an aspirant to stay updated with every little detail announced by the Board. The current edition of "NEET+ Physics Chapterwise – Topicwise Solved Papers [2021 – 2005]" serves as an effective question bank providing abundance of previous year's questions asked in last 17 years along with excellent answer quality. Arranged in Chapterwise – Topicwise format, this book divides the syllabus in two Parts where; Part I is based on Class XI NCERT syllabus whereas, Part II serves for Class XII NCERT syllabus. It also helps aspirants by giving clear idea regarding the chapter weightage from the beginning of their preparation. Besides benefitting for NEET, it is highly helpful for AIIMS, JIPER, Manipal, BVP, UPCPPMT, BHU examination. TOC Part I: Based on Class XI NCERT, Part II: Based on Class XII NCERT, NEET Solved paper 2021, NEET Solved Paper 2020.

Micromanufacturing Engineering and Technology, Second Edition, covers the major topics of micro-manufacturing. The book not only covers theory and manufacturing processes, but it uniquely focuses on a broader range of practical aspects of micro-manufacturing engineering and utilization by also covering materials, tools and equipment, manufacturing system issues, control aspects and case studies. By explaining material selection, design considerations and economic aspects, the book empowers engineers in choosing among competing technologies. With a focus on low-cost and high-volume micro-manufacturing processes, the updated title covers technologies such as micro-mechanical-cutting, laser-machining, micro-forming, micro-EDM, micro-ECM, hot-embossing, micro-injection molding, laser micro-sintering, thin film fabrication, inkjet technology, micro-joining, multiple processes machines, and more. Edited by one of the few world-experts in this relatively new, but rapidly-expanding area and presenting chapters written by a 40-strong team of leading industry specialists, this book is an invaluable source of information for engineers, R&D researchers and academics. Covers key micro-manufacturing technologies, processes and equipment with high-volume production capabilities, enabling large companies as well as SMEs to introduce those technologies in production and business and reduce production costs Outlines micro-manufacturing system engineering and practical issues pertaining to material, design, handling, metrology, inspection, testing, sensors, control, system integration and software, and micro-factories Enables manufacturing practitioners to choose the right technology suitable for a particular product-manufacture

This widely adopted textbook provides the essential content and skill-building tools for teaching the responsible conduct of scientific research. Scientific Integrity covers the breadth of concerns faced by scientists: protection of animal and human experimental subjects, scientific publication, intellectual property, conflict of interest, collaboration, record keeping, mentoring, and the social and ethical responsibilities of scientists. Learning activities and resources designed to elucidate the principles of Scientific Integrity include Dozens of highly relevant, interactive case studies for discussion in class or online Numerous print and online resources covering the newest research guidelines, regulations, mandates and policies Discussion questions, role-playing exercises, and survey tools to promote critical thought Documents including published rules of conduct, sample experimentation protocols, and patent applications The new edition of Scientific Integrity responds to significant recent changes—new mandates, policies, laws, and other developments—in the field of responsible conduct of research. Dr. Macrina plants the seeds of awareness of existing, changing, and emerging standards in scientific conduct and provides the tools to promote critical thinking in the use of that information. Scientific Integrity is the original turnkey text to guide the next generations of scientists as well as practicing researchers in the essential skills and approaches for the responsible conduct of science.

The most comprehensive match to the new 2014 Chemistry syllabus, this completely revised edition gives you unrivalled support for the new concept-based approach, the Nature of science. The only DP Chemistry resource that includes support directly from the IB, focused exam practice, TOK links and real-life applications drive achievement. "Astronomy and Astrophysics Abstracts" appearing twice a year has become one of the fundamental publications in the fields of astronomy, astrophysics and neighbouring sciences. It is the most important English-language abstracting journal in the mentioned branches. The abstracts are classified under more than a hundred subject categories, thus permitting a quick survey of the whole extended material. The AAA is a valuable and important publication for all students and scientists working in the fields of astronomy and related sciences. As such it represents a necessary ingredient of any astronomical library all over the world.

This paper computes data-driven correlation networks based on the stock returns of international banks and conducts a comprehensive analysis of their topological properties. We first apply spatial-dependence methods to filter the effects of strong common factors and a thresholding procedure to select the significant bilateral correlations. The analysis of topological characteristics of the resulting correlation networks shows many common features that have been documented in the recent literature but were obtained with private information on banks' exposures, including rich and hierarchical structures, based on but not limited to geographical proximity, small world features, regional homophily, and a core-periphery structure.

Covering the theory of computation, information and communications, the physical aspects of computation, and the physical limits of computers, this text is based on the notes taken by one of its editors, Tony Hey, on a lecture course on computation given by

The climate change reckoning looms. As scientists try to discern what the Earth's changing weather patterns mean for our future, Rachel Rothschild seeks to understand the current scientific and political debates surrounding the environment through the history of another global environmental threat: acid rain. The identification of acid rain in the 1960s changed scientific and popular understanding of fossil fuel pollution's potential to cause regional—and even global—environmental harms. It showed scientists that the problem of fossil fuel pollution was one that crossed borders—it could travel across vast stretches of the earth's atmosphere to impact ecosystems around the world. This unprecedented transnational reach prompted governments, for the first time, to confront the need to cooperate on pollution policies, transforming environmental science and diplomacy. Studies of acid rain and other pollutants brought about a reimagining of how to investigate the natural world as a complete entity, and the responses of policy makers, scientists, and the public set the stage for how societies have approached other prominent environmental dangers on a global scale, most notably climate change. Grounded in archival research spanning eight countries and five languages, as well as interviews with leading scientists from both government and industry, *Poisonous Skies* is the first book to examine the history of acid rain in an international context. By delving deep into our environmental past, Rothschild hopes to inform its future, showing us how much is at stake for the natural world as well as what we risk—and have already risked—by not acting.

Presents basic concepts in physics, covering topics such as kinematics, Newton's laws of motion, gravitation, fluids, sound, heat, thermodynamics, magnetism, nuclear physics, and more, examples, practice questions and problems.

In today's higher education climate academic staff are encouraged to focus not only on the up-to-date content of their teaching, but also to identify the most effective ways to engage students in learning, often alongside other key transferrable skills. This has led to a growing requirement for staff to adopt a scholarly approach to learning and teaching practice, and to undertake scholarship of learning and teaching as part of ongoing professional development. This text explores broad best practice approaches to undertaking enquiry into learning and teaching in higher education. It provides an introduction for staff who have been educated within a range of academic disciplines, often with high-level but very focused knowledge about, and understandings of, research processes to the potentially new world of educational enquiry. This is complemented by chapters exploring what educational enquiry means in the context of different academic disciplines, including physical sciences, mathematics, engineering, the life sciences, the arts, the humanities, the health professions, and law. It also includes: An overview of research methodology including data collection, literature reviews, good ethical practice, and research dissemination Case studies of actual research projects to support understanding of how to carry out educational enquiry in practice. Lecturers, why waste time waiting for the post arrive? Request and receive your e-inspection copy today!

Have you ever wondered what it is like to work on a nuclear power plant? Robert Dutch worked in the UK's nuclear industry for many years as a scientist and then as a tutor at a nuclear training center. He also holds degrees in theology. Drawing upon his qualifications and experience Robert addresses the controversial issue of nuclear power from a Christian perspective. In contrast to a negative nuclear narrative often portrayed, he presents a positive nuclear narrative alongside other ways of generating electricity. Be prepared to be challenged to think seriously about nuclear's merits in providing clean, low-carbon electricity.

This comprehensive book provides advice and guidance to those seeking to develop and enhance Masters level programmes. Based on practice, experience and research, it covers issues in design and delivery, helping to ensure that programmes are fit for purpose and meet contemporary needs in a rapidly changing and highly-competitive global market.

This timely overview of dose, benefit, and risk in medical imaging explains to readers how to apply this information for informed decision-making that improves patient outcomes. The chapters cover patient and physician perspectives, referral guidelines, appropriateness criteria, and quantifying medical imaging benefits. The authors have included essential discussion about radiologic physics in medical imaging, fundamentals of dose and image quality, risk assessment, and techniques for optimization and dose reduction. The book highlights practical implementation aspects with useful case studies and checklists for treatment planning. Clinicians, students, residents, and professionals in medical physics, biomedical engineering, radiology, oncology, and allied disciplines will find this book an essential resource with the following key features: Discusses risk, benefit, dose optimization, safety, regulation, radiological protection, and shared & informed decision-making. Covers regulatory oversight by government agencies, manufacturers, and societies. Highlights best practices for improving patient safety and outcomes. Gives guidelines on doses associated with specific procedures.

While the great scientists of the past recognized a need for a multidisciplinary approach, today's schools often treat math and science as subjects separate from the rest. This not only creates a disinterest among students, but also a potential learning gap once students reach college and then graduate into the workforce. *Cases on Research-Based Teaching Methods in Science Education* addresses the problems currently facing science education in the USA and the UK, and suggests a new hands-on approach to learning. This book is an essential reference source for policymakers, academicians, researchers, educators, curricula developers, and teachers as they strive to improve education at the elementary, secondary, and collegiate levels.

Information and communication technology occupies a central place in the modern world, with society becoming increasingly dependent on it every day. It is therefore

unsurprising that it has become a growing subject area in contemporary philosophy, which relies heavily on informational concepts. The Routledge Handbook of Philosophy of Information is an outstanding reference source to the key topics and debates in this exciting subject and is the first collection of its kind. Comprising over thirty chapters by a team of international contributors the Handbook is divided into four parts: basic ideas quantitative and formal aspects natural and physical aspects human and semantic aspects. Within these sections central issues are examined, including probability, the logic of information, informational metaphysics, the philosophy of data and evidence, and the epistemic value of information. The Routledge Handbook of Philosophy of Information is essential reading for students and researchers in philosophy, computer science and communication studies.

GRE Physics practice questions with the most complete explanations and step-by-step solutions - guaranteed higher GRE Physics score! . Last updated Jan 8, 2016. "We regularly update and revise the content based on readers' feedback and latest test changes. The most current version is only available directly from Amazon and Barnes & Noble. " . To achieve a GRE Physics score, you need to develop skills to properly apply the knowledge you have and quickly choose the correct answer. You must solve numerous practice questions that represent the style and content of the GRE Physics. This GRE Physics prep book contains over 1,300 practice questions with detailed explanations and step-by-step solutions. It is the most complete and comprehensive study tool that will teach you how to approach and solve a multitude of physics problems. This book consists of: - 12 diagnostic tests to help you identify your strengths and weaknesses to optimize your preparation strategy - topical practice question sets to drill down on each topic from a variety of angles and formula applications - test-taking strategies to maximize your performance on the test day - sheets of formulae, equations, variables and units to know for each topic ----- The practice questions that comprise this book will help you to: - master important GRE Physics topics - assess your knowledge of topics tested on the GRE Physics - improve your test-taking skills - prepare for the test comprehensively and cost effectively ----- These practice questions cover the following physics topics tested on the GRE Physics: Kinematics & dynamics Force, motion, gravitation Equilibrium and momentum Work & energy Waves & periodic motion Sound Fluids & solids Light & optics Heat & thermodynamics Atomic & nuclear structure Laboratory methods

Groundbreaking Handbook Offers Detailed Research and Valuable Methodology to Address Dangerous and Costly Aviation Hazard Though annual damages from bird and bat collisions with aircraft have been estimated at \$400 million in the United States and up to \$1.2 billion in commercial aviation worldwide and despite numerous conferences and councils dedicated to the issue, very little has been published on this expensive and sometimes-lethal flying risk. Bird Strike in Aviation seeks to fill this gap, providing a comprehensive guide to preventing and minimizing damage caused by bird strike on aircraft. Based on a thorough and comprehensive examination of the subject, Dr. El-Sayed offers different approaches to reducing bird strikes, including detailed coverage of the three categories necessary for such reduction, namely, awareness/education, bird management (active and passive control), and aircraft design. In addition, the text discusses the importance of cooperation between airplanes, airports and air traffic authorities as well as testing methods necessary for certification of both aircraft frame and engine. Other notable features include: Statistics and analyses for bird strikes with both civil and military helicopters as well as military fixed wing aircrafts, including annual costs, critical flight altitudes, critical parts of aircraft, distance from air base and specifics of date and timing Thorough review and analysis all fatal bird strike accidents and most non-fatal accidents since 1905, the first book to provide such a reference The use of numerical methods in analyzing historic data (ex. probability functions, finite element methods for analyzing impact on aircraft structure, experimental measurement technique for displacement, vibration, component distortion, etc.) Instruction on identification of bird species (using visual, microscopic, and DNA evidence) and details of bird migration to aid air traffic control in avoiding scenarios likely to result in collision With its wealth of statistical data, innovative research, and practical suggestions, Bird Strike in Aviation will prove a vital resource for researchers, engineers and graduate students in aerospace engineering/manufacturing or ornithology, as well as for military and civilian pilots and flight crew or professionals in aviation authorities and air traffic control.

Composites in Biomedical Applications presents a comprehensive overview on recent developments in composites and their use in biomedical applications. It features cutting-edge developments to encourage further advances in the field of composite research. Highlights a completely new research theme in polymer-based composite materials Outlines a broad range of different research fields, including polymer and natural fiber reinforcement used in the development of composites for biomedical applications Discusses advanced techniques for the development of composites and biopolymer-based composites Covers fatigue behavior, conceptual design in ergonomics design application, tissue regeneration or replacement, and skeletal bone repair of polymer composites Details the latest developments in synthesis, preparation, characterization, material evaluation, and future challenges of composite applications in the biomedical field This book is a comprehensive resource for advanced students and scientists pursuing research in the broad fields of composite materials, polymers, organic or inorganic hybrid materials, and nano-assembly.

This handbook is currently in development, with individual articles publishing online in advance of print publication. At this time, we cannot add information about unpublished articles in this handbook, however the table of contents will continue to grow as additional articles pass through the review process and are added to the site. Please note that the online publication date for this handbook is the date that the first article in the title was published online. For more information, please read the site FAQs.

Safety and Reliability – Safe Societies in a Changing World collects the papers presented at the 28th European Safety and Reliability Conference, ESREL 2018 in Trondheim, Norway, June 17-21, 2018. The contributions cover a wide range of methodologies and application areas for safety and reliability that contribute to safe societies in a changing

world. These methodologies and applications include: - foundations of risk and reliability assessment and management - mathematical methods in reliability and safety - risk assessment - risk management - system reliability - uncertainty analysis - digitalization and big data - prognostics and system health management - occupational safety - accident and incident modeling - maintenance modeling and applications - simulation for safety and reliability analysis - dynamic risk and barrier management - organizational factors and safety culture - human factors and human reliability - resilience engineering - structural reliability - natural hazards - security - economic analysis in risk management Safety and Reliability – Safe Societies in a Changing World will be invaluable to academics and professionals working in a wide range of industrial and governmental sectors: offshore oil and gas, nuclear engineering, aeronautics and aerospace, marine transport and engineering, railways, road transport, automotive engineering, civil engineering, critical infrastructures, electrical and electronic engineering, energy production and distribution, environmental engineering, information technology and telecommunications, insurance and finance, manufacturing, marine transport, mechanical engineering, security and protection, and policy making.

This volume, recording the 10th international symposium honoring noted French mathematical physicist Jean-Pierre Vigié surveys and continues to develop Unified Field Mechanics (UFM) from the perspective of Multiverse cosmology and Topological Field Theory. UFM represents a developing paradigm shift with many new parameters extending the Standard Model to a 3rd regime of Natural Science beyond Quantum Mechanics. UFM is now experimentally testable, thus putatively able to demonstrate the existence of large-scale additional dimensionality (LSXD), test for QED violating phenomena and surmount the quantum uncertainty principle leading to a new 'Age of Discovery' piling all prior ages in the historical progression: Classical Mechanics (3D) to Quantum Mechanics (4D) and now to the birth of the 3rd regime of UFM in additional dimensionality correlating with M-Theory. Many still consider the Planck-scale as the 'basement of reality'. This could only be considered true under the limitations of the Standard Model. As we methodically enter the new regime a profound understanding of the multiverse and additional dimensionality beckons.

What is the role of a university in society? In this innovative book, Chris Brink offers the timely reminder that it should have social purpose, as well as achieve academic excellence. The current obsession with rankings and league tables has perpetuated inequality and is preventing social mobility. This book shows how universities can – and should - respond to societal challenges and promote positive social change.

More than ten years on from the most intense phase of the global financial crisis, and the collective international response in the G20 summit in London, a 'new normal' has emerged with systems in place to mitigate against further banking crises. This updated new edition analyzes this post-crisis international and national regulatory framework and asks whether the current paradigm is fit for purpose as new dangers gestate and develop. This new edition includes a discussion of the impact of the aggressively deregulatory and anti-globalist policies of the Trump administration and its pursuit of an 'America First' policy and explores its implications for the regulatory landscape constructed and tended by previous leaders. The author addresses new and future systemic risks, many outside the regulated banking sector, which have grown in importance since 2015. He develops possible future scenarios for the international regulatory architecture, both negative and positive, asking, 'Are we better prepared for future banking crises?' New risks, including the COVID-19 pandemic and economic crash, are testing the global system; and the G20, without US leadership, may be failing in this latest most severe crisis of our lifetimes. This book provides a unique narrative explanation drawn from leading actors of key events and policy changes as they unfolded immediately post-crisis. The author builds upon the first edition to capture key developments that have occurred during the past five years, while raising key questions and vulnerabilities, and looking at future risks and challenges that may emerge. This text will be of great interest to students, teachers and researchers of financial frameworks, globalisation and political economy.

Summary: "This book brings together case study examples in the fields of sustainability, sustainable development, and education for sustainable development"--

Mineral-filled polymer composites are widely used in industries across the globe, and applications are continuously increasing in sectors such as shipping, manufacturing and renewable energy. One of two volumes comprising the Mineral-Filled Polymer Composites Handbook, this volume provides an overview of the latest research and future directions of advanced mineral fiber-reinforced polymer composites, focused specifically on materials properties. It covers fundamentals, recent progress and new materials involved in mineral-filled polymer composites and includes a wide-ranging list of chapters authored by an international team of experts. This book: Examines the properties of a wide range of materials, from macro- to nano-sized Highlights resources for bio-based minerals production and compares bio-based minerals with commercial mineral fillers Covers novel synthesis methods Discusses effects of aging on properties Describes using halloysite and montmorillonite to improve composite properties and the potential of using mineral fillers to enhance the properties of biopolymer and synthetic polymers This book serves as an excellent reference guide for researchers, advanced students, academics and industry professionals interested in the synthesis of mineral-filled polymer and biopolymer composites, as well as those pursuing research in the broad fields of composite materials, polymers, organic/inorganic hybrid materials and nano-assembly.

The trans-disciplinary thematic areas of oceans management and policy require stocktaking of the state of knowledge on ecosystem services being derived from coastal and marine areas. Recently adopted Sustainable Development Goals (SDGs) especially Goals 14 and 15 explicitly focus on this. This Handbook brings together a carefully chosen set of world-class contributions from ecology, economics, and other development science and attempts to provide policy relevant scientific information on ecosystem services from marine and coastal ecosystems, nuances of economic valuation, relevant legal and sociological response policies for effective management of marine areas for enhanced human well being. The contributors focus on the possible nexus of science-society and science-policy with the objective of informing on decision makers of the governmental

agencies, business and industry and civil society in general with respect to sustainable management of Oceans.

Presents a diverse perspective of successful, inspirational and progressive women in science and engineering Women of today from 29 countries provide overviews of their successful careers, the challenges they faced, and offer advice. They have lived in the same era, and perhaps also the same environment as you. Successful Women Ceramic and Glass Scientists and Engineers: 100 Inspirational Profiles features women born in the 1920's to 1970's. Reflecting a diversity of backgrounds and different sectors of the workforce, their profiles include: ?- Affiliation, points of contact, accomplishments (most-cited publication, most prestigious recognitions/awards, etc.), personal insight on her best career moment ? Brief biography, highlights of her successes, images from her career ? Personal commentary on her own career and pointers for younger scientists building careers This book provides novelty, inspiration, motivation and a bright perspective for the next generation of scientists and engineers seeking exciting and fulfilling careers. This book will be invaluable to mentors/professors, students and prospective students in science and engineering, scholars of gender studies, and scientific and engineering societies and organizations. "Lynnette Madsen has done a great service in writing this book, not just for women, but for society at large, because in the twenty-first century, we can no longer underutilize or ignore that half of the best." ? Rita Colwell, Director, United States National Science Foundation 1998-2004, Distinguished University Professor, University of Maryland, College Park, and Johns Hopkins Bloomberg School of Public Health "The book shows that opportunities in science exist in many countries around the world. Reading about the ways that took those women to their current positions is an exciting adventure." ? Yury Gogotsi, Professor, Drexel University "In addition to chronicling careers of great scientists, this book presents an array of career paths to young women and men -- a must read." ? Dr. Rainer Waser, Professor, Aachen University, Germany "It is inspiring to see that the successful women highlighted in this work are approaching life with courage and joy; they are changing paradigms and serving as voices for young girls. They are passionate about making a difference and breaking barriers; they are classy and fabulous." ? Dr. Olivia Graeve, Professor, University of California, San Diego New astronomical facilities, such as the under-construction Large Synoptic Survey Telescope and planned 30-meter-class telescopes, and new instrumentation on existing optical and infrared (OIR) telescopes, hold the promise of groundbreaking research and discovery. How can we extract the best science from these and other astronomical facilities in an era of potentially flat federal budgets for both the facilities and the research grants? Optimizing the U.S. Ground-Based Optical and Infrared Astronomy System provides guidance for these new programs that align with the scientific priorities and the conclusions and recommendations of two National Research Council (NRC) decadal surveys, New Worlds, New Horizons for Astronomy and Astrophysics and Vision and Voyages for Planetary Sciences in the Decade 2013-2022, as well as other NRC reports. This report describes a vision for a U.S. OIR System that includes a telescope time exchange designed to enhance science return by broadening access to capabilities for a diverse community, an ongoing planning process to identify and construct next generation capabilities to realize decadal science priorities, and near-term critical coordination, planning, and instrumentation needed to usher in the era of LSST and giant telescopes.

Sustainable Food Supply Chains: Planning, Design, and Control through Interdisciplinary Methodologies provides integrated and practicable solutions that aid planners and entrepreneurs in the design and optimization of food production-distribution systems and operations and drives change toward sustainable food ecosystems. With synthesized coverage of the academic literature, this book integrates the quantitative models and tools that address each step of food supply chain operations to provide readers with easy access to support-decision quantitative and practicable methods. Broken into three parts, the book begins with an introduction and problem statement. The second part presents quantitative models and tools as an integrated framework for the food supply chain system and operations design. The book concludes with the presentation of case studies and applications focused on specific food chains. Sustainable Food Supply Chains: Planning, Design, and Control through Interdisciplinary Methodologies will be an indispensable resource for food scientists, practitioners and graduate students studying food systems and other related disciplines. Contains quantitative models and tools that address the interconnected areas of the food supply chain Synthesizes academic literature related to sustainable food supply chains Deals with interdisciplinary fields of research (Industrial Systems Engineering, Food Science, Packaging Science, Decision Science, Logistics and Facility Management, Supply Chain Management, Agriculture and Land-use Planning) that dominate food supply chain systems and operations Includes case studies and applications

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