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## **KEY=SPECTRA - MOON HUNTER**

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## **SHAPE MEMORY POLYMERS**

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## **FUNDAMENTALS, ADVANCES AND APPLICATIONS**

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*Smithers Rapra* Shape-memory polymers (SMP) are a unique branch of the smart materials family which are capable of changing shape on-demand upon exposure to external stimulus. The discovery of SMP made a significant breakthrough in the developments of novel smart materials for a variety of engineering applications, superseded the traditional materials, and also influenced the current methods of product designing. This book provides the latest advanced information of on-going research domains of SMP. This will certainly enlighten the reader to the achievements and tremendous potentials of SMP. The basic fundamentals of SMP, including shape-memory mechanisms and mechanics are described. This will aid reader to become more familiar with SMP and the basic concepts, thus guiding them in undergoing independent research in the SMP field. The book also provides the reader with associated challenges and existing application problems of SMP. This could assist the reader to focus more on these issues and further exploit their knowledge to look for innovative solutions. Future outlooks of SMP research are discussed as well. This book should prove to be extremely useful for academics, R&D managers, researcher scientists, engineers, and all others related to the SMP research.

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## **INTRODUCTION TO STATISTICS**

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**YAMAHA YZF-R1 1998-2003**

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*Haynes Manuals N. America, Incorporated* Yamaha YZF-R1 1998-2003

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**HANDBOOK OF SURFACE AND COLLOID CHEMISTRY**

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*CRC Press* This new edition of the Handbook of Surface and Colloid Chemistry informs you of significant recent developments in the field. It highlights new applications and provides revised insight on surface and colloid chemistry's growing role in industrial innovations. The contributors to each chapter are internationally recognized experts. Several chapter

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**HONDA ACCORD 1994-1997**

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*Haynes Manuals N. America, Incorporated* There is a Haynes manual for most popular domestic and import cars, trucks, and motorcycles. By conducting complete tear-downs and rebuilds, the Haynes staff has discovered all the problems owners will find in rebuilding or repairing their vehicle. Documenting the process in hundreds of illustrations and clear step-by-step instructions makes every expert tip easy to follow. From simple maintenance to trouble-shooting and complete engine rebuilds, it's easy with Haynes.

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**ADDITIVES FOR PLASTICS HANDBOOK**

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*Elsevier* Both technically and economically, additives form a large and increasingly significant part of the polymer industry, both plastics and elastomers. Since the first edition of this book was published, there have been wide-ranging developments, covering chemistry and formulation of new and more efficient additive systems and the safer use of additives, both by processors in the factory and, in the wider field, as they affect the general public. This new edition follows the successful formula of its predecessor, it provides a comprehensive view of all types of additives, concentrating mainly on their technical aspects (chemistry/formulation, structure, function, main applications) with notes on the commercial background of each. The field has been expanded to include any substance that is added to a polymer to improve its use, so including reinforcing materials (such as glass fibre), carbon black and titanium dioxide. This is a book which has been planned for ease of use and the information is presented in a way which is appropriate to the users' needs.

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**BUILDING AND OPERATING A REALISTIC MODEL RAILWAY**

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## **A GUIDE TO RUNNING A LAYOUT LIKE AN ACTUAL RAILWAY**

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*The Crowood Press* This informative book provides a step-by-step account of the construction, from scratch, of a model railway called Dovedale. The model is operated like a real modern railway and was built entirely by the author within a strict low budget, using, wherever possible, recycled materials. Moreover, Dovedale is based on a specific prototype that exists in Buxton in Derbyshire, where freight trains run into an interchange siding, the locomotive runs round the train and then departs to a different destination. Some model railways are operated somewhat chaotically and are characterized by frequent derailments and locomotives that stop arbitrarily. If you wish to move away from this kind of layout and construct a model railway that operates realistically and reflects more closely the way that railways actually work in the second decade of the 21st century, then this is the book for you. Whilst constantly emphasizing realistic operation, the book covers layout planning and construction, controllers, point motors, power supply, cables and connectors, ways of operating traffic flows, signalling, track droppers, control panels and wiring, control and interlocking, lighting, sequence and block bells, the use of closed circuit television, and much more. Superbly illustrated with 258 colour photographs and diagrams.

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## **AUTOMOTIVE NEWS**

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## **AUTOMATIC CONTROL SYSTEMS**

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## **ADVANCED SIGNAL PROCESSING AND DIGITAL NOISE REDUCTION**

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*Springer-Verlag*

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## **MEASUREMENT, ANALYSIS AND REMEDIATION OF ENVIRONMENTAL POLLUTANTS**

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*Springer Nature* This book discusses contamination of water, air, and soil media. The book covers health effects of such contamination and discusses remedial measures to improve the situation. Contributions by experts provide a comprehensive discussion on the latest developments in the detection and analysis of contaminants, enabling researchers to understand the evolution of these pollutants in real time and develop more accurate source apportionment of these pollutants. The contents of this book will be of interest to researchers, professionals, and policy makers alike.

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## GLOBAL REPORT ON PSORIASIS

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This WHO Global report on psoriasis brings the public health impact of psoriasis into focus. The report is written to help raise awareness of the range of ways that psoriasis can affect peoples' lives. It intends to empower policy-makers with practical solutions to improve the health care and social inclusion of people living with psoriasis in their populations. The report highlights that much of the suffering caused by this common and complex disease can be avoided. Improving access to early diagnosis and appropriate treatment for psoriasis requires universally accessible health-care systems that provide people-centered care for patients with complex, lifelong conditions. Governments also have a key role to play in seeking to address the unnecessary social consequences of psoriasis by the challenging the myths and behaviors that lead to the exclusion of patients from healthcare settings and daily life.

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## THE FINGERPRINT

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### SOURCEBOOK

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*CreateSpace* The idea of The Fingerprint Sourcebook originated during a meeting in April 2002. Individuals representing the fingerprint, academic, and scientific communities met in Chicago, Illinois, for a day and a half to discuss the state of fingerprint identification with a view toward the challenges raised by Daubert issues. The meeting was a joint project between the International Association for Identification (IAI) and West Virginia University (WVU). One recommendation that came out of that meeting was a suggestion to create a sourcebook for friction ridge examiners, that is, a single source of researched information regarding the subject. This sourcebook would provide educational, training, and research information for the international scientific community.

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## PAVEMENT DESIGN AND MATERIALS

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*John Wiley & Sons* A comprehensive, state-of-the-art guide to pavement design and materials With innovations ranging from the advent of Superpave™, the data generated by the Long Term Pavement Performance (LTPP) project, to the recent release of the Mechanistic-Empirical pavement design guide developed under NCHRP Study 1-37A, the field of pavement engineering is experiencing significant development. Pavement Design and Materials is a practical reference for both students and practicing engineers that explores all the aspects of pavement engineering, including materials, analysis, design, evaluation, and economic analysis. Historically, numerous techniques have been applied by a multitude of jurisdictions dealing with roadway pavements. This book focuses on the best-established, currently applicable techniques available. Pavement Design and Materials offers complete coverage of: The characterization of traffic input The characterization of pavement bases/subgrades and aggregates Asphalt binder and asphalt

concrete characterization Portland cement and concrete characterization Analysis of flexible and rigid pavements Pavement evaluation Environmental effects on pavements The design of flexible and rigid pavements Pavement rehabilitation Economic analysis of alternative pavement designs The coverage is accompanied by suggestions for software for implementing various analytical techniques described in these chapters. These tools are easily accessible through the book's companion Web site, which is constantly updated to ensure that the reader finds the most up-to-date software available.

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## **FUNDAMENTALS OF SUPPLY CHAIN THEORY**

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*John Wiley & Sons* *Comprehensively* teaches the fundamentals of supply chain theory This book presents the methodology and foundations of supply chain management and also demonstrates how recent developments build upon classic models. The authors focus on strategic, tactical, and operational aspects of supply chain management and cover a broad range of topics from forecasting, inventory management, and facility location to transportation, process flexibility, and auctions. Key mathematical models for optimizing the design, operation, and evaluation of supply chains are presented as well as models currently emerging from the research frontier. *Fundamentals of Supply Chain Theory, Second Edition* contains new chapters on transportation (traveling salesman and vehicle routing problems), integrated supply chain models, and applications of supply chain theory. New sections have also been added throughout, on topics including machine learning models for forecasting, conic optimization for facility location, a multi-supplier model for supply uncertainty, and a game-theoretic analysis of auctions. The second edition also contains case studies for each chapter that illustrate the real-world implementation of the models presented. This edition also contains nearly 200 new homework problems, over 60 new worked examples, and over 140 new illustrative figures. Plentiful teaching supplements are available, including an Instructor's Manual and PowerPoint slides, as well as MATLAB programming assignments that require students to code algorithms in an effort to provide a deeper understanding of the material. Ideal as a textbook for upper-undergraduate and graduate-level courses in supply chain management in engineering and business schools, *Fundamentals of Supply Chain Theory, Second Edition* will also appeal to anyone interested in quantitative approaches for studying supply chains.

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## **SPECTRAL LINE SHAPES IN ASTROPHYSICS AND RELATED TOPICS**

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*MDPI* Spectral lines, widths, and shapes are powerful tools for emitting/absorbing gas diagnostics in different astrophysical objects (from the solar system to the most distant objects in the universe—quasars). On the other hand, experimental and theoretical investigations of laboratory plasma have been applied in spectroscopic astrophysical research, especially in research on atomic data needed for line shape calculations. Data on spectral lines and their profiles are also important for diagnostics, analysis, and the

modelling of fusion plasma, laser-produced plasma, laser design and development, and various plasmas in industry and technology, like light sources based on plasmas or the welding and piercing of metals by laser-produced plasma. The papers from this book can be divided into four groups: 1. stark broadening data for astrophysical and laboratory plasma investigations; 2. applications of spectral lines for astrophysical and laboratory plasma research; 3. spectral line phenomena in extragalactic objects, and 4. laboratory astrophysics results for spectra investigation. The reviews and research papers, representing new research on the topics presented in this book, are of interest for specialists and PhD students. We hope that the present book will be useful and interesting for scientists interested in the investigation of spectral line shapes and will contribute to the education of young researchers and PhD students.

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### **ENZYMES: CATALYSIS, KINETICS AND MECHANISMS**

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*Springer* This enzymology textbook for graduate and advanced undergraduate students covers the syllabi of most universities where this subject is regularly taught. It focuses on the synchrony between the two broad mechanistic facets of enzymology: the chemical and the kinetic, and also highlights the synergy between enzyme structure and mechanism. Designed for self-study, it explains how to plan enzyme experiments and subsequently analyze the data collected. The book is divided into five major sections: 1] Introduction to enzymes, 2] Practical aspects, 3] Kinetic Mechanisms, 4] Chemical Mechanisms, and 5] Enzymology Frontiers. Individual concepts are treated as stand-alone chapters; readers can explore any single concept with minimal cross-referencing to the rest of the book. Further, complex approaches requiring specialized techniques and involved experimentation (beyond the reach of an average laboratory) are covered in theory with suitable references to guide readers. The book provides students, researchers and academics in the broad area of biology with a sound theoretical and practical knowledge of enzymes. It also caters to those who do not have a practicing enzymologist to teach them the subject.

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### **HANDBOOK OF POLYMER SYNTHESIS, CHARACTERIZATION, AND PROCESSING**

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*John Wiley & Sons* Covering a broad range of polymer science topics, Handbook of Polymer Synthesis, Characterization, and Processing provides polymer industry professionals and researchers in polymer science and technology with a single, comprehensive handbook summarizing all aspects involved in the polymer production chain. The handbook focuses on industrially important polymers, analytical techniques, and formulation methods, with chapters covering step-growth, radical, and co-polymerization, crosslinking and grafting, reaction engineering, advanced technology applications, including conjugated, dendritic, and nanomaterial polymers and emulsions, and characterization methods, including spectroscopy, light scattering, and microscopy.

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## HANDBOOK FOR SOUND ENGINEERS

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*CRC Press Handbook for Sound Engineers* is the most comprehensive reference available for audio engineers, and is a must read for all who work in audio. With contributions from many of the top professionals in the field, including Glen Ballou on interpretation systems, intercoms, assistive listening, and fundamentals and units of measurement, David Miles Huber on MIDI, Bill Whitlock on audio transformers and preamplifiers, Steve Dove on consoles, DAWs, and computers, Pat Brown on fundamentals, gain structures, and test and measurement, Ray Rayburn on virtual systems, digital interfacing, and preamplifiers, Ken Pohlmann on compact discs, and Dr. Wolfgang Ahnert on computer-aided sound system design and room-acoustical fundamentals for auditoriums and concert halls, the *Handbook for Sound Engineers* is a must for serious audio and acoustic engineers. The fifth edition has been updated to reflect changes in the industry, including added emphasis on increasingly prevalent technologies such as software-based recording systems, digital recording using MP3, WAV files, and mobile devices. New chapters, such as Ken Pohlmann's *Subjective Methods for Evaluating Sound Quality*, S. Benjamin Kanters's *Hearing Physiology—Disorders—Conservation*, Steve Barbar's *Surround Sound for Cinema*, Doug Jones's *Worship Styles in the Christian Church*, sit aside completely revamped staples like Ron Baker and Jack Wrightson's *Stadiums and Outdoor Venues*, Pat Brown's *Sound System Design*, Bob Cordell's *Amplifier Design*, Hardy Martin's *Voice Evacuation/Mass Notification Systems*, and Tom Danley and Doug Jones's *Loudspeakers*. This edition has been honed to bring you the most up-to-date information in the many aspects of audio engineering.

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## INTRODUCTION TO PLASMA PHYSICS AND CONTROLLED FUSION

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### VOLUME 1: PLASMA PHYSICS

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*Springer Science & Business Media* TO THE SECOND EDITION In the nine years since this book was first written, rapid progress has been made scientifically in nuclear fusion, space physics, and nonlinear plasma theory. At the same time, the energy shortage on the one hand and the exploration of Jupiter and Saturn on the other have increased the national awareness of the important applications of plasma physics to energy production and to the understanding of our space environment. In magnetic confinement fusion, this period has seen the attainment 13 of a Lawson number  $nTE$  of  $2 \times 10 \text{ cm}^{-3} \text{ sec}$  in the Alcator tokamaks at MIT; neutral-beam heating of the PL T tokamak at Princeton to  $KTi = 6.5 \text{ keV}$ ; increase of average  $\beta$  to 3%-5% in tokamaks at Oak Ridge and General Atomic; and the stabilization of mirror-confined plasmas at Livermore, together with injection of ion current to near field-reversal conditions in the 2XII $\beta$  device. Invention of the tandem mirror has given magnetic confinement a new and exciting dimension. New ideas have emerged, such as the compact torus, surface-field devices, and the E $\beta$ T mirror-torus hybrid, and some old ideas, such as the

stellarator and the reversed-field pinch, have been revived. Radiofrequency heating has become a new star with its promise of dc current drive. Perhaps most importantly, great progress has been made in the understanding of the MHD behavior of toroidal plasmas: tearing modes, magnetic VII VIII islands, and disruptions.

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## **MODERN QUANTUM MECHANICS**

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*Cambridge University Press* A comprehensive and engaging textbook, providing a graduate-level, non-historical, modern introduction of quantum mechanical concepts.

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## **DESIGN OF ANALOG CMOS INTEGRATED CIRCUITS**

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*McGraw-Hill Companies* This textbook deals with the analysis and design of analog CMOS integrated circuits, emphasizing recent technological developments and design paradigms that students and practicing engineers need to master to succeed in today's industry. Based on the author's teaching and research experience in the past ten years, the text follows three general principles: (1) Motivate the reader by describing the significance and application of each idea with real-world problems; (2) Force the reader to look at concepts from an intuitive point of view, preparing him/her for more complex problems; (3) Complement the intuition by rigorous analysis, confirming the results obtained by the intuitive, yet rough approach.

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## **HEMOGLOBIN-BASED OXYGEN CARRIERS AS RED CELL SUBSTITUTES AND OXYGEN THERAPEUTICS**

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*Springer Science & Business Media* Currently, hemoglobin (Hb)-based oxygen carriers (HBOCs) are leading candidates as red blood cell substitutes. In addition, HBOCs are also potential oxygen therapeutics for treatment of patients with critical ischemic conditions due to atherosclerosis, diabetes and other conditions. This book will provide readers a comprehensive review of topics involved in the HBOC development. It focusses on current products and clinical applications as well as on emerging technologies and future prospects.

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## **THE STRUCTURAL ENGINEER'S PROFESSIONAL TRAINING MANUAL**

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*McGraw Hill Professional* The Business and Problem-Solving Skills Needed for Success in Your Engineering Career! The Structural Engineer's Professional Training Manual offers a solid foundation in the real-world business and problem-solving skills needed in the engineering workplace. Filled with illustrations and practical "punch-list" summaries, this career-building guide provides an introduction to the practice and business of structural and civil engineering, including lots of detailed advice on developing

competence and communicating ideas. Comprehensive and easy-to-understand, The Structural Engineer's Professional Training Manual features: Recommendations for successfully training engineers who are new to the field Methods for bringing together ideas from a variety of sources to find workable solutions to difficult problems Information on the real-world behaviors of building materials Guidance on licensing, liability, regulations, and employment Techniques for responsibly estimating design time and cost Tips on communicating design ideas effectively Strategies for working successfully as part of a team Inside This Skills-Building Engineering Resource • The Dynamics of Training • The World of Professional Engineering • The Business of Structural Engineering • Building Projects • Bridge Projects • Building Your Own Competence • Communicating Your Designs • Engineering Mechanics • Soil Mechanics • Understanding the Behavior of Concrete • Understanding the Behavior of Masonry Construction • Understanding the Behavior of Structural Steel • Understanding the Behavior of Wood Framing

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## **WHO LABORATORY MANUAL FOR THE EXAMINATION OF HUMAN SEMEN AND SPERM-CERVICAL MUCUS INTERACTION**

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*Cambridge University Press* The definitive and essential source of reference for all laboratories involved in the analysis of human semen.

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## **SUICIDAL BEHAVIOUR**

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## **UNDERLYING DYNAMICS**

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*Routledge* *Suicidal Behaviour: Underlying dynamics* is a wide ranging collection of articles that builds upon an earlier volume by the same editor (*Suicidal Behaviour: Assessment of people-at-risk*, 2010) and delves deeper into the dynamics of suicide by synthesizing significant psychological and interdisciplinary perspectives. The volume brings together varied conceptualizations by scholars across disciplines from around the globe, thereby adding on to the available theoretical understandings as well as providing research based inputs for practitioners in the field of suicidal behaviour. This book contains sixteen chapters divided into two broad sections. The volume opens with a discussion about the Theoretical Underpinnings of suicidal behaviour spread through the initial eight chapters that conceptualize the phenomenon from different vantage points of genetics, personality theory, cognitive and affective processes, stress and assessment theories. The second section brings in the Varied Research Evidences and Assessment Perspectives from different populations and groups. Building upon the theoretical foundations the chapters in this section discuss the nuances of dealing with suicidal behaviours among sexual minority populations, alcoholics, military personnel, and within in specific socio-cultural groups. The section closes with an intense focus on a significant issue encountered often in clinical practice, that of assessment of suicide risk.

and ways of resolving the cultural, ethical and legal dilemmas.

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## **BEAUTIFUL VISUALIZATION**

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### **LOOKING AT DATA THROUGH THE EYES OF EXPERTS**

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*"O'Reilly Media, Inc."* Visualization is the graphic presentation of data -- portrayals meant to reveal complex information at a glance. Think of the familiar map of the New York City subway system, or a diagram of the human brain. Successful visualizations are beautiful not only for their aesthetic design, but also for elegant layers of detail that efficiently generate insight and new understanding. This book examines the methods of two dozen visualization experts who approach their projects from a variety of perspectives -- as artists, designers, commentators, scientists, analysts, statisticians, and more. Together they demonstrate how visualization can help us make sense of the world. Explore the importance of storytelling with a simple visualization exercise Learn how color conveys information that our brains recognize before we're fully aware of it Discover how the books we buy and the people we associate with reveal clues to our deeper selves Recognize a method to the madness of air travel with a visualization of civilian air traffic Find out how researchers investigate unknown phenomena, from initial sketches to published papers Contributors include: Nick Bilton, Michael E. Driscoll, Jonathan Feinberg, Danyel Fisher, Jessica Hagy, Gregor Hochmuth, Todd Holloway, Noah Iliinsky, Eddie Jabbour, Valdean Klump, Aaron Koblin, Robert Kosara, Valdis Krebs, JoAnn Kuchera-Morin et al., Andrew Odewahn, Adam Perer, Anders Persson, Maximilian Schich, Matthias Shapiro, Julie Steele, Moritz Stefaner, Jer Thorp, Fernanda Viegas, Martin Wattenberg, and Michael Young.

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### **HANDBOOK OF REFERENCE METHODS FOR PLANT ANALYSIS**

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*CRC Press* The Handbook of Reference Methods for Plant Analysis is an outstanding resource of plant analysis procedures, outlined in easy-to-follow steps and laboratory-ready for implementation. Plant laboratory preparation methods such as dry ashing and acid and microwave digestion are discussed in detail. Extraction techniques for analysis of readily soluble elements (petiole analysis) and quick test kits for field testing are also presented. This handbook consolidates proven, time tested methods in one convenient source. Plant scientists in production agriculture, forestry, horticulture, environmental sciences, and other related disciplines will find the Handbook a standard laboratory reference. The Handbook was written for the Soil and Plant Analysis Council, Inc., of which the editor is a board member. The council aims to promote uniform soil test and plant analysis methods, use, interpretation, and terminology; and to stimulate research on the calibration and use of soil testing and plant analysis. This reference will help readers reach these important goals in their own research.

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## FRONTIERS OF MULTIMEDIA RESEARCH

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*Morgan & Claypool* The field of multimedia is unique in offering a rich and dynamic forum for researchers from “traditional” fields to collaborate and develop new solutions and knowledge that transcend the boundaries of individual disciplines. Despite the prolific research activities and outcomes, however, few efforts have been made to develop books that serve as an introduction to the rich spectrum of topics covered by this broad field. A few books are available that either focus on specific subfields or basic background in multimedia. Tutorial-style materials covering the active topics being pursued by the leading researchers at frontiers of the field are currently lacking. In 2015, ACM SIGMM, the special interest group on multimedia, launched a new initiative to address this void by selecting and inviting 12 rising-star speakers from different subfields of multimedia research to deliver plenary tutorial-style talks at the ACM Multimedia conference for 2015. Each speaker discussed the challenges and state-of-the-art developments of their prospective research areas in a general manner to the broad community. The covered topics were comprehensive, including multimedia content understanding, multimodal human-human and human-computer interaction, multimedia social media, and multimedia system architecture and deployment. Following the very positive responses to these talks, the speakers were invited to expand the content covered in their talks into chapters that can be used as reference material for researchers, students, and practitioners. Each chapter discusses the problems, technical challenges, state-of-the-art approaches and performances, open issues, and promising direction for future work. Collectively, the chapters provide an excellent sampling of major topics addressed by the community as a whole. This book, capturing some of the outcomes of such efforts, is well positioned to fill the aforementioned needs in providing tutorial-style reference materials for frontier topics in multimedia. At the same time, the speed and sophistication required of data processing have grown. In addition to simple queries, complex algorithms like machine learning and graph analysis are becoming common. And in addition to batch processing, streaming analysis of real-time data is required to let organizations take timely action. Future computing platforms will need to not only scale out traditional workloads, but support these new applications too. This book, a revised version of the 2014 ACM Dissertation Award winning dissertation, proposes an architecture for cluster computing systems that can tackle emerging data processing workloads at scale. Whereas early cluster computing systems, like MapReduce, handled batch processing, our architecture also enables streaming and interactive queries, while keeping MapReduce's scalability and fault tolerance. And whereas most deployed systems only support simple one-pass computations (e.g., SQL queries), ours also extends to the multi-pass algorithms required for complex analytics like machine learning. Finally, unlike the specialized systems proposed for some of these workloads, our architecture allows these computations to be combined, enabling rich new applications that intermix, for example, streaming and batch processing. We achieve these results through a simple extension to MapReduce that adds primitives for data sharing, called Resilient Distributed Datasets (RDDs). We show that this is enough to capture

a wide range of workloads. We implement RDDs in the open source Spark system, which we evaluate using synthetic and real workloads. Spark matches or exceeds the performance of specialized systems in many domains, while offering stronger fault tolerance properties and allowing these workloads to be combined. Finally, we examine the generality of RDDs from both a theoretical modeling perspective and a systems perspective. This version of the dissertation makes corrections throughout the text and adds a new section on the evolution of Apache Spark in industry since 2014. In addition, editing, formatting, and links for the references have been added.

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## **AUTOMOTIVE PAINTS AND COATINGS**

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*John Wiley & Sons* Now in its second edition and still the only book of its kind, this is an authoritative treatment of all stages of the coating process -- from body materials, paint shop design, and pre-treatment, through primer surfacers and top coats. New topics of interest covered are color control, specification and testing of coatings, as well as quality and supply concepts, while valuable information on capital and legislation aspects is given. Invaluable for engineers in the automotive and paints and coatings industry as well as for students in the field.

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## **THE PALGRAVE HANDBOOK OF CRITICAL PHYSICAL GEOGRAPHY**

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*Springer* This handbook is recognition of the need to better integrate physical and human geography. It combines a collection of work and research within the new field of Critical Physical Geography, which gives critical attention to relations of social power with deep knowledge of a particular field of biophysical science. Critical Physical Geography research accords careful attention to biophysical landscapes and the power relations that have increasingly come to shape them, and to the politics of environmental science and the role of biophysical inquiry in promoting social and environmental justice. The Palgrave Handbook of Critical Physical Geography lays out the scope and guiding principles of Critical Physical Geography research. It presents a carefully selected set of empirical work, demonstrating the range and intellectual strength of existing integrative work in geography research. This handbook is the first of its kind to cover this emerging discipline and will be of significant interest to students and academics across the fields of geography, the environment and sustainability.

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## **OIL SPILL ENVIRONMENTAL FORENSICS**

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## **FINGERPRINTING AND SOURCE IDENTIFICATION**

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*Elsevier Oil Spill Environmental Forensics* provides a complete view of the various forensic techniques used to identify the source of an oil spill into the environment. The forensic procedures described within represent various methods from scientists throughout the world. The authors explore which analytical and interpretative techniques are best suited for a particular oil spill project. This handy reference also explores the use of these techniques in actual environmental oil spills. Famous incidents discussed include the Exxon Valdez incident in 1989 and the Guanabara Bay, Brazil 2000. The authors chronicle both the successes and failures of the techniques used for each of these events. Dr. Zhendi Wang is a senior research scientist and Head of Oil Spill Research of Environment Canada, working in the oil and toxic chemical spill research field. He has authored over 270 academic publications and won a number of national and international scientific honors and awards. Dr. Wang is a member of American Chemical Society (ACS), the Canadian Society for Chemistry (CSC), and the International Society of Environmental Forensics (ISEF). International experts show readers the forensic techniques used in oil spill investigations Provides the theoretical basis and practical applications for investigative techniques Contains numerous case studies demonstrating proven technique

## **ENGLISH FOR ACADEMIC RESEARCH: WRITING EXERCISES**

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*Springer Science & Business Media* This book is based on a study of referees' reports and letters from journal editors on reasons why papers written by non-native researchers are rejected due to problems with English (long sentences, redundancy, poor structure etc). It draws on English-related errors from around 5000 papers written by non-native authors, around 3000 emails, 500 abstracts by PhD students, and over 1000 hours of teaching researchers how to write and present research papers. The exercises are organized into ten chapters on: punctuation and spelling word order writing short sentences and paragraphs link words - connecting phrases and sentences together being concise and removing redundancy ambiguity and political correctness paraphrasing and avoiding plagiarism defining, comparing, evaluating and highlighting anticipating possible objections, indicating level of certainty, discussion limitations, hedging, future work writing each section of a paper Some exercises require no actual writing but simply choosing between various options, thus facilitating self-study, e-reading and rapid progress. In those exercises where extended writing is required, model answers are given. Exercise types are repeated for different contexts, for example the importance of being concise is tested for use in papers, referees' reports, and emails of various types. Such repetition of similar types of exercises is designed to facilitate revision. The exercises can also be integrated into English for Academic Purposes (EAP) and English for Special Purposes (ESP) courses at universities and research institutes. The book can be used in conjunction with the other exercise books in the series and is cross-referenced to: English for Research: Usage, Style, and Grammar English for Writing Research Papers

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## PRODUCTS FROM OLIVE TREE

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*BoD - Books on Demand* Olive tree products provide a number of documented presentations of the production and quality of the two most important olive tree products: virgin olive oil and table olives. It is a source that familiarizes readers with recent approaches and innovations that can be introduced in the virgin olive oil extraction and stabilization technology and the preparation of table olives with emphasis on the presence of bioactive constituents. It also describes advances in the methods of checking authenticity and in the evaluation of attributes that may influence consumers' perceptions and preferences. Other topics discussed are squalene, a trove of metabolic actions, pigments, geographical indication, biotechnology in table olive preparation, and recovery of hydroxytyrosol from olive-milling wastes.

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## RADIOLABELLED MOLECULES FOR BRAIN IMAGING WITH PET AND SPECT

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*MDPI* Positron emission tomography (PET) and single-photon emission computed tomography (SPECT) are in vivo molecular imaging methods which are widely used in nuclear medicine for diagnosis and treatment follow-up of many major diseases. These methods use target-specific molecules as probes, which are labeled with radionuclides of short half-lives that are synthesized prior to the imaging studies. These probes are called radiopharmaceuticals. The use of PET and SPECT for brain imaging is of special significance since the brain controls all the body's functions by processing information from the whole body and the outside world. It is the source of thoughts, intelligence, memory, speech, creativity, emotion, sensory functions, motion control, and other important body functions. Protected by the skull and the blood-brain barrier, the brain is somehow a privileged organ with regard to nutrient supply, immune response, and accessibility for diagnostic and therapeutic measures. Invasive procedures are rather limited for the latter purposes. Therefore, noninvasive imaging with PET and SPECT has gained high importance for a great variety of brain diseases, including neurodegenerative diseases, motor dysfunctions, stroke, epilepsy, psychiatric diseases, and brain tumors. This Special Issue focuses on radiolabeled molecules that are used for these purposes, with special emphasis on neurodegenerative diseases and brain tumors.

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## IGNEOUS ROCKS AND PROCESSES

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### A PRACTICAL GUIDE

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*John Wiley & Sons* This book is for geoscience students taking introductory or intermediate-level courses in igneous petrology, to help develop key skills (and confidence) in identifying igneous minerals, interpreting and allocating appropriate names to unknown rocks presented to them. The book thus serves, uniquely, both as a conventional course text and as a practical laboratory manual. Following

an introduction reviewing igneous nomenclature, each chapter addresses a specific compositional category of magmatic rocks, covering definition, mineralogy, eruption/ emplacement processes, textures and crystallization processes, geotectonic distribution, geochemistry, and aspects of magma genesis. One chapter is devoted to phase equilibrium experiments and magma evolution; another introduces pyroclastic volcanology. Each chapter concludes with exercises, with the answers being provided at the end of the book. Appendices provide a summary of techniques and optical data for microscope mineral identification, an introduction to petrographic calculations, a glossary of petrological terms, and a list of symbols and units. The book is richly illustrated with line drawings, monochrome pictures and colour plates. Additional resources for this book can be found at: <http://www.wiley.com/go/gill/igneous>.

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### **AN INTRODUCTION TO MATHEMATICAL TAXONOMY**

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*Courier Corporation* For students of mathematical biology, an introduction to taxonomic characters, measurement of similarity, analysis of principal components, multidimensional scaling, cluster analysis, identification and assignment techniques, and the construction of evolutionary trees.

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### **CONFOCAL RAMAN MICROSCOPY**

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*Springer* This second edition provides a cutting-edge overview of physical, technical and scientific aspects related to the widely used analytical method of confocal Raman microscopy. The book includes expanded background information and adds insights into how confocal Raman microscopy, especially 3D Raman imaging, can be integrated with other methods to produce a variety of correlative microscopy combinations. The benefits are then demonstrated and supported by numerous examples from the fields of materials science, 2D materials, the life sciences, pharmaceutical research and development, as well as the geosciences.

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### **MODERN QUANTUM MECHANICS**

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*Cambridge University Press* Modern Quantum Mechanics is a classic graduate level textbook, covering the main quantum mechanics concepts in a clear, organized and engaging manner. The author, Jun John Sakurai, was a renowned theorist in particle theory. The second edition, revised by Jim Napolitano, introduces topics that extend the text's usefulness into the twenty-first century, such as advanced mathematical techniques associated with quantum mechanical calculations, while at the same time retaining classic developments such as neutron interferometer experiments, Feynman path integrals, correlation measurements, and Bell's inequality. A solution manual for instructors using this textbook can be downloaded from [www.cambridge.org/9781108422413](http://www.cambridge.org/9781108422413).

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**OBJECT-BASED IMAGE ANALYSIS**

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**SPATIAL CONCEPTS FOR KNOWLEDGE-DRIVEN REMOTE SENSING APPLICATIONS**

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*Springer Science & Business Media* This book brings together a collection of invited interdisciplinary perspectives on the recent topic of Object-based Image Analysis (OBIA). Its content is based on select papers from the 1<sup>st</sup> OBIA International Conference held in Salzburg in July 2006, and is enriched by several invited chapters. All submissions have passed through a blind peer-review process resulting in what we believe is a timely volume of the highest scientific, theoretical and technical standards. The concept of OBIA first gained widespread interest within the GIScience (Geographic Information Science) community circa 2000, with the advent of the first commercial software for what was then termed 'object-oriented image analysis'. However, it is widely agreed that OBIA builds on older segmentation, edge-detection and classification concepts that have been used in remote sensing image analysis for several decades. Nevertheless, its emergence has provided a new critical bridge to spatial concepts applied in multiscale landscape analysis, Geographic Information Systems (GIS) and the synergy between image-objects and their radiometric characteristics and analyses in Earth Observation data (EO).