

Ozaki Yumi In Size 13

When we look beyond lesson planning and curricula—those explicit facets that comprise so much of our discussion about education—we remember that teaching is an inherently social activity, shaped by a rich array of implicit habits, comportments, and ways of communicating. This is as true in the United States as it is in Japan, where Akiko Hayashi and Joseph Tobin have long studied early education from a cross-cultural perspective. Taking readers inside the classrooms of Japanese preschools, *Teaching Embodied* explores the everyday, implicit behaviors that form a crucially important—but grossly understudied—aspect of educational practice. Akiko Hayashi and Joseph Tobin embed themselves in the classrooms of three different teachers at three different schools to examine how teachers act, think, and talk. Drawing on extended interviews, their own real-time observations, and hours of video footage, they focus on how teachers embody their lessons: how they use their hands to gesture, comfort, or discipline; how they direct their posture, gaze, or physical location to indicate degrees of attention; and how they use the tone of their voice to communicate empathy, frustration, disapproval, or enthusiasm. Comparing teachers across schools and over time, they offer an illuminating analysis of the gestures that comprise a total body language, something that, while hardly ever explicitly discussed, the teachers all share to a remarkable degree. Showcasing the tremendous importance of—and dearth of attention to—this body language, they offer a powerful new inroad into educational study and practice, a deeper understanding of how teaching actually works, no matter what culture or country it is being practiced in.

Understanding the dynamics of reactive polymer processes allows scientists to create new, high-value, high-performance polymers. This book is an indispensable resource for researchers and practitioners working in this area. It includes coverage of thermoplastics, thermoset and reactive polymers, together with practical industrial processes and modern chemorheological models and tools.

Since the first TRP ion channel was discovered in *Drosophila melanogaster* in 1989, the progress made in this area of signaling research has yielded findings that offer the potential to dramatically impact human health and wellness. Involved in gateway activity for all five of our senses, TRP channels have been shown to respond to a wide range of stimuli from both within and outside the cell body. How we sense heat and cold, how we taste food, how eggs are fertilized, how the heart expands and contracts is each dependent on the function of these channels. While no single book could possibly cover all the research being undertaken, *TRP Ion Channel Function in Sensory Transduction and Cellular Signaling Cascades* presents the most advanced compilation of work in this area to date. All 31 chapters are written by international pioneers working at the vanguard of TRP ion channel research. They explain much about the pivotal function and behavior of these channels, which are most exquisitely tuned to their specific tasks, and delve into how researchers are putting this knowledge to use in the development of novel pharmaceuticals, which may well prove effective in ameliorating treatment-resistant conditions including cancer, heart disease, inflammation, and immune system dysfunctions. Individual chapters shed light on selected topics of interest in the TRP arena, such as signal transduction in axonal path-finding, and in vascular, renal, and auditory functions, as well as pain. The text also covers subjects as diverse as mating and fertilization, inflammatory pain, and mechanisms of pheromone detection in mammals. While the book presents much new insight and explores findings that will be of interest to those involved with advanced research, it also includes significant background material for those looking to familiarize themselves with this exceptionally promising path of inquiry.

This book gathers selected high-quality research papers presented at the Sixth International Congress on Information and Communication Technology, held at Brunel University, London, on February 25–26, 2021. It discusses emerging topics pertaining to information and communication technology (ICT) for managerial applications, e-governance, e-agriculture, e-education and computing technologies, the Internet of things (IoT) and e-mining. Written by respected experts and researchers working on ICT, the book offers a valuable asset for young researchers involved in advanced studies. The book is presented in four volumes.

Patents
Socio-ecological Production Landscapes of Japan
Chobits Omnibus
The Fading Golden Age of Japanese Poetry
Chemorheology of Polymers
Myths & Legends of Japan
An Atlas of Genetic Disorders of Skeletal Development

The purpose of this book is to convey to the worldwide scientific community the rapid and enthusiastic progress of state-of-the-art quantum chemistry. Quantum chemistry continues to grow with remarkable success particularly due to rapid progress in supercomputers. The usefulness of quantum chemistry is almost limitless. Its application covers not only physical chemistry but also organic and inorganic chemistry, physics, and life sciences. This book deals with all of these topics. Frontiers of Quantum Chemistry is closely related to the symposium of the same name held at Kwansai Gakuin University at Nishinomiya, Japan, in November 2015. The book's contributors, however, include not only invited speakers at the symposium but also many other distinguished scientists from wide areas of quantum chemistry around the world.

Any discussion of Japanese contemporary art inevitably leads to the pop-culture fantasies of Takashi Murakami, Yoshitomo Nara and the other artists of the Superflat movement. But Japan as a whole has changed dramatically after stumbling through a series of economic, social and ecological crises since the collapse of its "bubble" economy in the early 1990s. How did Murakami, Nara and Superflat become the dominant artistic vision of the Japan of today? What lies behind their imagery of a childish and decadent society unable to face up to reality? Written by a sociologist with an eye for sharp observation and clear reportage, *Before and After Superflat* offers the first comprehensive history in English of the Japanese art world from 1990 up to the tsunami of March 2011, and its struggle to find a voice amidst Japan's economic decline and China's economic ascent.

Discusses early Japanese immigration, the labor-contracting system and organized labor, and the impact of changing U.S. immigration policy

Pithy phrases handed down through a distinguished line of Chinese and Japanese Zen masters.

A History of Japanese Journalism

A History and Complete Filmography

Tanka and Haiku of the Meiji-Taisho-Showa Period

Human Interface and the Management of Information. Designing Information

Japan's Press Club as the Last Obstacle to a Mature Press

Preparation, Properties and Applications

Discover an essential overview of recent advances and trends in nanoparticle catalysis *Catalysis in the presence of metal nanoparticles is an important and rapidly developing research field at the frontier of homogeneous and heterogeneous catalysis. In Nanoparticles in Catalysis, accomplished chemists and authors Karine Philippot and Alain Roucoux deliver a comprehensive guide to the key aspects of nanoparticle catalysis, ranging from synthesis, activation methodology, characterization, and theoretical modeling, to application in important catalytic reactions, like hydrogen production and biomass conversion. The book offers readers a review of modern and efficient tools for the synthesis of nanoparticles in solution or onto supports. It emphasizes the application of metal nanoparticles in important catalytic reactions and includes chapters on activation methodology and supported nanoclusters. Written by an international team of leading voices in the field, Nanoparticles in Catalysis is an indispensable resource for researchers and professionals in academia and industry alike.*

Readers will also benefit from the inclusion of: A thorough introduction to New Trends in the Design of Metal Nanoparticles and Derived Nanomaterials for Catalysis An exploration of Dynamic Catalysis and the Interface Between Molecular and Heterogeneous Catalysts A practical discussion of Metal Nanoparticles in Water: A Relevant Toolbox for Green Catalysis A concise treatment of the opportunities and challenges of CO2 Hydrogenation to Oxygenated Chemicals Over Supported Nanoparticle Catalysts Perfect for catalytic, organic, inorganic, and physical chemists, Nanoparticles in Catalysis will also earn a place in the libraries of chemists working with organometallics and materials scientists seeking a one-stop resource with expert knowledge on the synthesis and characterization of nanoparticle catalysis.

The structural, biochemical and clinical events related to menstruation, implantation, parturition, endometriosis, abnormal uterine bleeding and endometrial cancer are discussed in this comprehensive volume on the biological functions of the endometrium. New topics, such as the biochemical and molecular mechanisms regulating maternal embryonic interaction, are explored, and gynecologic endoscopy and therapeutic tools are discussed. The proceedings of the first conference is also available from the Academy, as volume 622 of The Annals of The New York Academy of Science.

Covering both theory and progressive experiments, Quantum Computing: From Linear Algebra to Physical Realizations explains how and why superposition and entanglement provide the enormous computational power in quantum computing. This self-contained, classroom-tested book is divided into two sections, with the first devoted to the theoretical aspects of quantum computing and the second focused on several candidates of a working quantum computer, evaluating them according to the DiVincenzo criteria. Topics in Part I Linear algebra Principles of quantum mechanics Qubit and the first application of quantum information processing-quantum key distribution Quantum gates Simple yet elucidating examples of quantum algorithms Quantum circuits that implement integral transforms Practical quantum algorithms, including Grover's database search algorithm and Shor's factorization algorithm The disturbing issue of decoherence Important examples of quantum error-correcting codes (QECC) Topics in Part II DiVincenzo criteria, which are the standards a physical system must satisfy to be a candidate as a working quantum computer Liquid state NMR, one of the well-understood physical systems Ionic and atomic qubits Several types of Josephson junction qubits The quantum dots realization of qubits Looking at the ways in which quantum computing can become reality, this book delves into enough theoretical background and experimental research to support a thorough understanding of this promising field.

This book introduces recent progress in preparation and application of core-shell and yolk-shell structures for attractive design of catalyst materials. Core-shell nanostructures with active core particles covered directly with an inert shell can perform as highly active and selective catalysts with long lifetimes. Yolk-shell nanostructures consisting of catalytically active core particles encapsulated by hollow materials are an emerging class of nanomaterials. The enclosed void space is expected to be useful for encapsulation and compartmentation of guest molecules, and the outer shell acts as a physical barrier to protect the guest molecules from the surrounding environment. Furthermore, the tunability and functionality in the core and the shell regions can offer new catalytic properties, rendering them attractive platform materials for the design of heterogeneous catalysts. This book describes the recent development of such unique nanostructures to design effective catalysts which can lead to new chemical processes. It provides an excellent guide for design and application of core-shell and yolk-shell structured catalysts for a wide range of readers working on design of attractive catalysts, photocatalysts, and electrocatalysts for energy, environmental, and green chemical processes.

From Fundamental Principles to Reactive Processing

Teaching Embodied

Satoyama--satoumi Ecosystems and Human Well-being

Modified Nucleic Acids

Recent Developments In Plasmon-supported Raman Spectroscopy: 45 Years Of Enhanced Raman Signals

In Vitro Differentiation of T-Cells

Neurogenic Dysphagia

Monsters known as yōkai have long haunted the Japanese cultural landscape. This history of the strange and mysterious in Japan seeks out these creatures in folklore, encyclopedias, literature, art, science, games, manga, magazines and movies, exploring their meanings in the Japanese imagination over three centuries.

Behavior Trees in Robotics and AIAn IntroductionCRC Press

In Japan, the kisha-clubs are the focal point between the authorities and the media - they are not the counterpart of the leisurely, informal nature of western press clubs of which the free access to information is of the essence.

From pulp comics to Maus, the story of the growth of comics in American culture.

Nanoparticles in Catalysis

The Evolution of the American Comic Book

Stimulated Raman Scattering Microscopy

Biodegradable Matrices and Composites

Single-Walled Carbon Nanotubes

A Description of Historical Episodes, Legendary Characters, Folk-lore, Myths, Religious Symbolism, Illustrated in the Arts of Old Japan

Near-Infrared Spectroscopy

The series Topics in Current Chemistry Collections presents critical reviews from the journal Topics in Current Chemistry organized in topical volumes. The scope of coverage is all areas of chemical science including the interfaces with related disciplines such as biology, medicine and materials science. The goal of each thematic volume is to give the non-specialist reader, whether in academia or industry, a comprehensive insight into an area where new research is emerging which is of interest to a larger scientific audience. Each review within the volume critically surveys one aspect of that topic and places it within the context of the volume as a whole. The most significant developments of the last 5 to 10 years are presented using selected examples to illustrate the principles discussed. The coverage is not intended to be an exhaustive summary of the field or include large quantities of data, but should rather be conceptual, concentrating on the methodological thinking that will allow the non-specialist reader to understand the information presented. Contributions also offer an outlook on potential future developments in the field.

This two-volume set LNCS 12184 and 12185 constitutes the refereed proceedings of the Thematic Area on Human Interface and the Management of Information, HIMI 2020, held as part of HCI International 2020 in Copenhagen, Denmark. HCII 2020 received a total of 6326 submissions, of which 1439 papers and 238 posters were accepted for publication after a careful reviewing process. The 72 papers presented in the two volumes were organized in the following topical sections: Part I: information presentation and visualization; service design and management; and information in VR and AR. Part II: recommender and decision support systems; information, communication, relationality and learning; supporting work, collaboration and creativity; and information in intelligent systems and environments. *The conference was held virtually due to the COVID-19 pandemic.*

This book spans diverse aspects of modified nucleic acids, from chemical synthesis and spectroscopy to in vivo applications, and highlights studies on chemical modifications of the backbone and nucleobases. Topics discussed include fluorescent pyrimidine and purine analogs, enzymatic approaches to the preparation of modified nucleic acids, emission and electron paramagnetic resonance (EPR) spectroscopy for studying nucleic acid structure and dynamics, non-covalent binding of low- and high-MW ligands to nucleic acids and the design of unnatural base pairs. This unique book addresses new developments and is designed for graduate level and professional research purposes.

Vincent Bulone et al.: Cellulose sources and new understanding of synthesis in plants Thomas Heinze et al.:Cellulose structure and properties Thomas Rosenau, Antje Potthast, Ute Henniges et al.: Recent developments in cellulose aging (degradation / yellowing / chromophore formation) Sunkyu Park et al.:Cellulose crystallinity Lina Zhang et al.:Gelation and dissolution behavior of cellulose Yoshiyuki Nishio et al.:Cellulose and derivatives in liquid crystals Alessandro Gandini, Naceur Belgacem et al.:The surface and in-depth modification of cellulose fibers Emily D. Cranston et al.:Interfacial properties of cellulose Herbert Sixta, Michael Hummel et al.Cellulose Fibers Regenerated from Cellulose Solutions in Ionic Liquids Qi Zhou et al.:Cellulose-based biocomposites Orlando Rojas et al.:Films of cellulose nanocrystals and nanofibrils Pedro Fardim et al.:Functional cellulose particles Wadood Hamad et al.:Cellulose Composites

Sayings of the Masters

Legend in Japanese Art

TRP Ion Channel Function in Sensory Transduction and Cellular Signaling Cascades

Pain 2012 Refresher Courses: 14th World Congress on Pain

Advances in Synthesis and Applications

A Short History of Japanese Contemporary Art, 1990-2011

Japanese Monsters and the Culture of Yokai

Stimulated Raman Scattering Microscopy: Techniques and Applications describes innovations in instrumentation, data science, chemical probe development, and various applications enabled by a **state-of-the-art stimulated Raman scattering (SRS) microscopy**. Beginning by introducing the history of SRS, this book is composed of seven parts in depth including instrumentation strategies that have pushed the physical limits of SRS microscopy, vibrational probes (which increased the SRS imaging functionality), data science methods, and recent efforts in miniaturization. This rapidly growing field needs a comprehensive resource that brings together the current knowledge on the topic, and this book does just that. Researchers who need to know the requirements for all aspects of the instrumentation as well as the requirements of different imaging applications (such as different types of biological tissue) will benefit enormously from the examples of successful demonstrations of SRS imaging in the book. Led by Editor-in-Chief Ji-Xin Cheng, a pioneer in coherent Raman scattering microscopy, the editorial team has brought together various experts on each aspect of SRS imaging from around the world to provide an authoritative guide to this increasingly important imaging technique. This book is a comprehensive reference for researchers, faculty, postdoctoral researchers, and engineers. Includes every aspect from theoretic reviews of SRS spectroscopy to innovations in instrumentation and current applications of SRS microscopy Provides copious visual elements that illustrate key information, such as SRS images of various biological samples and instrument diagrams and schematics Edited by leading experts of SRS microscopy, with each chapter written by experts in their given topics

Satoyama is a Japanese term describing mosaic landscapes of different ecosystems—secondary forests, farm lands, irrigation ponds and grasslands—along with human settlements managed to produce bundles of ecosystem services for human wellbeing.The concept of satoyama, longstanding traditions associated with land management practices that allow sustainable use of natural resources, has been extended to cover marine and coastal ecosystems (satoumi). These landscapes and seascapes have been rapidly changing, and the ecosystem services they provide are under threat from varioussocial, economic, political, and technological factors. Satoyama-Satoumi Ecosystems and Human Well-Being presents the findings of the Japan Satoyama Satoumi Assessment (JSSA), a study of the interaction between humans and ecosystems in Japan. It was written by the 200-plus authors, stakeholders, andreviewers from Japan and elsewhere who make up the JSSA team. The study analyzes changes that have occurred in satoyama-satoumi ecosystems over the last 50 years and identifies plausible future scenarios for the year 2050, taking into account various drivers such as governmental and economic policy, climate change, technology, and sociobehavioral responses. This provides a new approach to land-use planning that addresses not only economic development but also cultural values and ecologicalintegrity. This book is a key reference text for development planners, policymakers, scientists, postgraduate students, and others interested in the environment and development.

A young man describes his torment as he struggles to reconcile the diverse influences of Western culture and the traditions of his own Japanese heritage

Pain 2012: Refresher Courses, 14th World Congress on Pain, is based on IASP's refresher courses on pain research and treatment. Includes techniques (neuroimaging, genetics), treatments (interventional, psychological, pharmacological, complementary/alternative), and disorders (neuropathic pain, headache, cancer pain, musculoskeletal pain, CRPS, orofacial pain, postoperative pain, pediatric pain, abdominopelvic pain).

The Issei

Thematic Area, HIMI 2020, Held as Part of the 22nd International Conference, HCII 2020, Copenhagen, Denmark, July 19–24, 2020, Proceedings, Part I

An Introduction

Core-Shell and Yolk-Shell Nanocatalysts

Demanding Respect**Cultural Practice in Japanese Preschools****Pandemonium and Parade**

This book provides knowledge of the basic theory, spectral analysis methods, chemometrics, instrumentation, and applications of near-infrared (NIR) spectroscopy—not as a handbook but rather as a sourcebook of NIR spectroscopy. Thus, some emphasis is placed on the description of basic knowledge that is important in learning and using NIR spectroscopy. The book also deals with applications for a variety of research fields that are very useful for a wide range of readers from graduate students to scientists and engineers in both academia and industry. For readers who are novices in NIR spectroscopy, this book provides a good introduction, and for those who already are familiar with the field it affords an excellent means of strengthening their knowledge about NIR spectroscopy and keeping abreast of recent developments.

Scanning Electrochemical Microscopy describes the theory and operating principles of scanning electrochemical microscopy (SECM), including instrumentation, tip preparation, imaging techniques and potentiometric probes. The book explores applications relevant to electron transfer reactions, reaction kinetics, chemical events at interfaces, biological

International society led by the United Nations has been working to improve and standardize every country's post-disaster recovery policy. In particular, the Sendai Framework for Disaster Risk Reduction adopted at the UN World Conference at Sendai, Japan, in 2015 declared the slogan "Build Back Better (BBB)." In this book, the BBB is considered an essential common criterion for evaluating recovery status, but BBB variations in each individual country's context are pursued. In contrast to a governmental approach to recovery evaluation focusing mainly on physical structures and macro indicators, this volume focuses more on the affected societies, communities, economies, and especially victims' livelihoods. The authors are academics from diverse fields, including governance, law, economics, and engineering, so that the book is truly interdisciplinary. This collection results from an international collaboration by scholars from "disaster-affected universities" in global-scale mega-disasters occurring in the Asian region in recent decades. The universities include Kobe University in Japan; Iwate University in Japan; Syiah Kuala University in Aceh, Indonesia; Sichuan University in China; and the University of the Philippines.

Surface enhanced Raman scattering (SERS) might be one of the most impressive effects to demonstrate the power of plasmonic approaches in spectroscopy and became one of the "triggers" for the rapidly emerging field of plasmonics. This book provides a review of some recent developments in SERS, such as tip enhanced Raman scattering (TERS), reports new experimental observations, sophisticated new SERS-active structures and substrates, new theoretical insight to explain the effect as well as exciting applications in various fields such as analytical science, biomedicine and nanotechnology. Written for graduate students and established researchers looking for inspiration for future work, its interdisciplinary nature makes the book suitable for readers in the fields of chemistry, physics, biology, medicine, nanotechnology and materials science. Contents: Nanoplasmonics Fundamentals and Surface-Enhanced Raman Scattering as a Physical Phenomenon (Mark I Stockman)Frontiers in Electromagnetic Mechanism Of SERS (Tamtake Itoh)Plasmon-Supported Two-Photon Excited Vibrational Sensing and Imaging (Janina Kneipp and Katrin Kneipp)Plasmonically Enhanced Elastic and Inelastic Light Scattering for Real-Time Study of Molecular Cell Functions (Sajanlal R Panikkanvalappil and Mostafa A El-Sayed)Deep-Ultraviolet Surface- and Tip-Enhanced Raman Spectroscopy (Atsushi Taguchi)Lithographically Prepared SERS-Active Substrates with Well-Defined Gaps Below 1nm (Kenneth Crozier and Wenqi Zhu)Hierarchical Porous Plasmonic Nanostructures as New SERS Substrates with Ultra-High Reproducibility and Sensitivity (Dang Yuan Lei)Shell-Isolated Nanoparticle-Enhanced Raman Spectroscopy (Jian-Feng Li, Rajapandiyam Panneerselvam and Zhong-Qun Tian)Ultra-High Vacuum Tip-Enhanced Raman Spectroscopy (Naihao Chiang, Guillaume Goubert, Eric A Pozzi, Michael O McAnally, Craig Chapman, Nan Jiang, George C Schatz and Richard P Van Duyne)Tip-Enhanced Raman Spectroscopy for Surface and Interface Analysis (Jin-Hui Zhong, Xiang Wang, Teng-Xiang Huang, Sheng-Chao Huang and Bin Ren)Tip-Enhanced Raman Scattering in Liquid/Solution (Prompong Pienpinijtham and Yukihiro Ozaki)Tip-Enhanced Raman Scattering of Nanocarbons (Sanpon Vantasin, Yoshito Okuno, Yuika Saito and Yukihiro Ozaki)Chemical Identification by Sub-Nanometer Resolved Single-Molecule Raman Scattering (Yao Zhang, Yang Zhang, Zhenchao Dong and Jianguo Hou)SERS Theory: The Chemical Effect of Rhodamine 6G Adsorption on Silver Surfaces on Its Raman Spectrum (Lindsey R Madison, Mark A Ratner and George C Schatz)Graphene-Enhanced Raman Scattering (GERS): Chemical Effect (Xi Ling, Shengxi Huang, Jing Kong and Mildred Dresselhaus)Charge-Transfer-Induced Enhancement of Raman Scattering Based on Semiconductors (Wei Ji, Xiao Xia Han and Bing Zhao) Readership: Graduate students and established researchers looking for inspiration for future work in the fields of chemistry, physics, biology, medicine, nanotechnology and materials science. Keywords: Surface-Enhanced Raman Scattering;SERS;Analytical Chemistry;Spectroscopy;Plasmon-Supported Raman SpectroscopyReview:0

Cognitive-Functional Approaches to the Study of Japanese as a Second Language

No Longer Human

Quantum Computing

Cellulose Chemistry and Properties: Fibers, Nanocelluloses and Advanced Materials

Frontiers of Quantum Chemistry

Methods and Protocols

Theory, Spectral Analysis, Instrumentation, and Applications

The Toho Studios Story: A History and Complete Filmography provides a complete picture of every Toho feature the Japanese studio produced and released - as well as foreign films that it distributed - during its first 75 years. Presented chronologically, each entry in the filmography includes, where applicable, the original Japanese title, a direct translation of that title, the film's international, U.S. release and alternate titles; production credits including each film's producers, director, screenwriters, cinematographers, art directors, and composers, among others; casts with character names; production companies, technical specs, running times, and release dates; U.S. release data including distributor, whether the film was released subtitled or dubbed, and alternate versions; domestic and international awards; and plot synopses.

The definitive guide to genetic bone disorders, now revised and expanded with glossy photographs and radiographs "Brilliantly written and produced and deserves to be on the shelves of all pediatric radiologists. It should also be available to geneticists, counselors, and pediatricians." --Radiology This updated and expanded fourth edition of *Bone Dysplasias* presents age-related radiographs, photographs and clinical guidelines for more than 250 rare constitutional skeletal diseases. Focusing on diagnostically essential imaging and clinical features, each chapter is supplemented with prognostic and therapeutic information, a guide to differential diagnoses, and a short list of the most relevant publications. Organized in accordance with the most recent International Nosology and Classification of Genetic Skeletal Disorders, this new *Bone Dysplasias* distills the insights of a small, world-class author team on diagnosis and clinical approaches to this most difficult class of disorders.

This book explores the vital importance of T-cell differentiation in areas as wide-ranging as pathological analysis, drug development, and cell therapy of human T-cells. Focusing on human embryonic stem cells and human induced pluripotent stem cells, the chapters explore a variety of in vitro T-cell differentiation protocols as well as useful techniques to develop and evaluate cellular medicines. Written for the highly successful *Methods in Molecular Biology* series, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, *In Vitro Differentiation of T-Cells: Methods and Protocols* serves as an ideal guide for researchers seeking to differentiate T-cells from pluripotent stem cells in order to achieve any number of significant goals.

This innovative and original volume brings together studies that apply cognitive and functional linguistics to the study of the L2 acquisition of Japanese. With each article grounded on the usage-based model and/or conceptual notions such as foregrounding and subjectivity, the volume sheds light on how cognitive and functional linguistics can help us understand aspects of Japanese acquisition that have been neglected by traditionalists.

A Zen Forest

The Toho Studios Story

Official Gazette of the United States Patent and Trademark Office

Bone Dysplasias

From Linear Algebra to Physical Realizations

The Human Endometrium

Behavior Trees in Robotics and AI

Behavior Trees (BTs) provide a way to structure the behavior of an artificial agent such as a robot or a non-player character in a computer game. Traditional design methods, such as finite state machines, are known to produce brittle behaviors when complexity increases, making it very hard to add features without breaking existing functionality. BTs were created to address this very problem, and enables the creation of systems that are both modular and reactive. Behavior Trees in Robotics and AI: An Introduction provides a broad introduction as well as an in-depth exploration of the topic, and is the first comprehensive book on the use of BTs. This book introduces the subject of BTs from simple topics, such as semantics and design principles, to complex topics, such as learning and task planning. For each topic, the authors provide a set of examples, ranging from simple illustrations to realistic complex behaviors, to enable the reader to successfully combine theory with practice. Starting with an introduction to BTs, the book then describes how BTs relate to, and in many cases, generalize earlier switching structures, or control architectures. These ideas are then used as a foundation for a set of efficient and easy to use design principles. The book then presents a set of important extensions and provides a set of tools for formally analyzing these extensions using a state space formulation of BTs. With the new analysis tools, the book then formalizes the descriptions of how BTs generalize earlier approaches and shows how BTs can be automatically generated using planning and learning. The final part of the book provides an extended set of tools to capture the behavior of Stochastic BTs, where the outcomes of actions are described by probabilities. These tools enable the computation of both success probabilities and time to completion. This book targets a broad audience, including both students and professionals interested in modeling complex behaviors for robots, game characters, or other AI agents. Readers can choose at which depth and pace they want to learn the subject, depending on their needs and background.

This book is a clinical manual that covers the whole spectrum of swallowing and its disorders. It starts with physiology of swallowing, pathophysiology of disordered deglutition, diagnostic methods (clinical and instrumental) and ends with an in-depth's and up-to-date presentation of current treatment options. The clinically most relevant topics of dysphagia management on the stroke unit and the intensive care unit are dealt with in separate chapters. Also the closely intertwined issue of nutritional management is specifically addressed. Most importantly, the book covers all obligatory topics of the Flexible Endoscopic Evaluation of Swallowing (FEES)-curriculum, an educational initiative that started in Germany in 2014 and is currently being extended to other European and non-European countries. The book is richly illustrated and an online video section provides a number of typical patient cases. FEES is probably the most commonly chosen method for the objective assessment of swallowing and its disorders. It is used in stroke units, intensive care facilities, geriatric wards but also in rehabilitation clinics and within dedicated outpatient services. This book on neurogenic dysphagia therefore addresses a wide range of different medical disciplines, such as neurologists, geriatricians, intensive care physicians, rehabilitation physicians, gastroenterologists, otolaryngologists, phoniatrists and also speech-language pathologists.

Proceedings of Sixth International Congress on Information and Communication Technology

Scanning Electrochemical Microscopy

ICICT 2021, London, Volume 3

Challenges of Asian Disaster Recovery

Techniques and Applications

Before and After Superflat

The World of the First Generation Japanese Immigrants, 1885-1924