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Yearbook on Space Policy 2014 CAA2014: 21st Century Archaeology Food and Nutrition Throughout Life Handbook of Research methods and Applications in Environmental Studies The Neighbours of the European Union's Neighbours European Banking Union Circular Economy and the Nordic Swan Ecolabel The United Nations and Freedom of Expression and Information Quick Revision for Financial Accounting (For ICWA Intermediate: Paper 5) Global Economic Cooperation The Paris Agreement on Climate Change Masquerades of War Queering International Law Playing with Fire Systemic and Non-Systemic Opposition in the Russian Federation Cultural Networks in Migrating Heritage Education in Australia, New Zealand and the Pacific Undersea Fiber Communication Systems Security and the Turkey-EU Accession Process Fiber-Wireless Convergence in Next-Generation Communication Networks Optical Fiber Telecommunications Routledge Handbook of National and Regional Ocean Policies Errorless UPPSC General Studies Prelim Paper 1 - 10 Year-wise Solved Papers (2010 - 19) Transitions to Good Governance Future Access Enablers for Ubiquitous and Intelligent Infrastructures Consumer Protection and Online Auction Platforms The Politics of Adaptation Silicon Light-Emitting Diodes and Lasers Designing Worlds Epigenetic Modifications and Viral Infections Autoimmuno-Anti-Tumour Immunity (AATI) - Understanding the Immune Responses against "Self" & "Altered-self" Human Development Report 2014 Dual Role of Microglia in Health and Disease: Pushing the Balance Towards Repair Genetic and Genome-Wide Insights into Microbes Studied for Bioenergy Transnational Gas Markets and Euro-Russian Energy Relations The Two-Way Link between Eating Behavior and Brain Metabolism China's Energy Security New therapeutic targets for human placental angiogenesis diseases Emotional Modulation of the Synapse The Interpretation and Uniformity of the UNCITRAL Model Law on International Commercial Arbitration

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Why have so few countries managed to leave systematic corruption behind, while in many others modernization is still a mere façade? How do we escape the trap of corruption, to reach a governance system based on ethical universalism? In this unique book, Alina Mungiu-Pippidi and Michael Johnston lead a team of eminent researchers on an illuminating path towards deconstructing the few virtuous circles in contemporary governance. The book combines a solid theoretical framework with quantitative evidence and case studies from around the world. While extracting lessons to be learned from the success cases covered, *Transitions to Good Governance* avoids being prescriptive and successfully contributes to the understanding of virtuous circles in contemporary good governance. Tulsian's *Quick Revision for Financial Accounting* is a self-study handbook. Loaded with practical questions, this book is a perfect revision text - comprises structured questions based on pattern and scheme adopted in examinations. This book provides an up-to-date and well-grounded analysis of education in Australia, New Zealand and the Pacific, including Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu. Leading writers from throughout this region identify contemporary educational challenges, issues, and priorities while drawing upon their own ongoing empirical research. Key themes include the impact of international trends and developments; educational reform and the quality of education; indigenous learning; inclusivity; aid and development co-operation; and the changing role and place of tertiary education. Detailed studies of specific educational systems and developments are considered in the light of broader analyses that run throughout the volume. Recent failures and rescues of large banks have resulted in colossal costs to society. In wake of such turmoil a new banking union must enable better supervision, pre-emptive coordinated action and taxpayer protection. While these aims are meritorious they will be difficult to achieve. This book explores the potential of a new banking union in Europe. This book brings together leading experts to analyse the challenges of banking in the European Union. While not all contributors agree, the constructive criticism provided in this book will help ensure that a new banking union will mature into a stable yet vibrant financial system that encourages the growth of economic activity and the efficient allocation of resources. This book will be of use to researchers interested in Banking, Monetary Economics and the European Union. The global mandate for safer, cleaner and renewable energy has accelerated research on microbes that convert carbon sources to end-products serving as biofuels of the so-called first, second or third generation - e.g., bioethanol or biodiesel derived from starchy, sugar-rich or oily crops; bioethanol derived from composite lignocellulosic biomass; and biodiesels extracted from oil-producing algae and cyanobacteria, respectively. Recent advances in 'omics' applications are beginning to cast light on the biological mechanisms underlying biofuel production. They also unravel mechanisms important for organic solvent or high-added-value chemical production, which, along with those for fuel chemicals, are significant to the broader field of Bioenergy. The *Frontiers in Microbial Physiology Research* Topic that led to the current e-book

publication, operated from 2013 to 2014 and welcomed articles aiming to better understand the genetic basis behind Bioenergy production. It invited genetic studies of microbes already used or carrying the potential to be used for bioethanol, biobutanol, biodiesel, and fuel gas production, as also of microbes posing as promising new catalysts for alternative bioproducts. Any research focusing on the systems biology of such microbes, gene function and regulation, genetic and/or genomic tool development, metabolic engineering, and synthetic biology leading to strain optimization, was considered highly relevant to the topic. Likewise, bioinformatic analyses and modeling pertaining to gene network prediction and function were also desirable and therefore invited in the thematic forum. Upon e-book development today, we, at the editorial, strongly believe that all articles presented herein – original research papers, reviews, perspectives and a technology report – significantly contribute to the emerging insights regarding microbial-derived energy production.

Katherine M. Pappas, 2016 This research topic collected and connected information concerning both the underlying metabolic mechanisms and consequences of eating behaviors. These two aspects are tremendously important for a better understanding of eating behavior abnormalities as well as for improving education on eating disorders and behaviors. This Handbook presents methods to advance the understanding of interdependencies between the well-being of human societies and the performance of their biophysical environment. It showcases applications to material and energy use; urbanization and tech The transition to Circular Economy necessitates right incentives for choosing products and services with lower environmental impacts, in the form of price signals and sufficient environmental information. An ecolabel indicates that the product is, environmentally speaking, among the best products available on the market and thus has the role to steer stepwise developments towards sustainability. The Swan criteria promote quality products with requirements on durability and the use of secondary raw materials. To further align the criteria with Circular Economy, future criteria development might focus more on aspects including upgradability, reparability, multi-functionality, component reuse and innovative forms of consumption and production. This report was prepared as part of a Nordic project, and the results could be useful in the development of the Nordic Ecolabel in the future.

Optical Fiber Telecommunications, Volume Eleven, covers the latest in optical fiber communications and their potential to penetrate and complement other forms of communication, such as wireless access, on-premises networks, interconnects and satellites. This updated edition of this classic, first published in 1979, examines opportunities for future optical fiber technology by presenting the latest advances on key topics, such as 5G wireless access, inter and intra data center communications, THz technologies, secure communications, and free space digital optical links. Topics of note include sections on foundries for widespread user access, designing photonic integrated circuits (PICs), monolithic and hybrid integration technologies, nanophotonics, and advanced and non-conventional data modulation formats. The traditional emphasis of achieving higher data rates and longer transmission distances are also addressed through chapters on space-division-multiplexing using multimode and multicore fibers, undersea cable systems, and reconfigurable networking. This book is an indispensable reference on the latest advances in key technologies for future fiber optic communications. It is suitable for university and industry researchers, graduate students, optical systems implementers, network operators, managers and investors. Updated edition presents the latest advances in optical fiber components, systems, subsystems and networks Written by leading authorities from academia and industry Gives a self-contained overview of specific technologies, covering both the state-of-the-art and future research challenges In the age of globalization, digitization, and media convergence, traditional hierarchies between media are breaking down. This book offers new approaches to understanding the politics and their underlying ideologies that are reshaping our global media landscape, including questions of audience participation and transmedia storytelling. A large number of publications have described impaired angiogenesis and vasculogenesis present in the fetoplacental circulation after pregnancy diseases such as pre-eclamptic pregnancies, gestational diabetes, and intrauterine growth restriction, among others. Results suggest impaired secretion and activity of pro-angiogenic factors such as vascular endothelial growth factor (VEGF), interleukin 8 (IL-8), adenosine and nitric oxide, associates with compromised secretion and activity of anti-angiogenic factors such as soluble receptor of VEGF (sFlt-1), thrombospondin 2, endostatin among others. More recent evidences include the participation of endothelial progenitor cells (EPC), which circulating number is reduced infetoplacental circulation in pregnancies such as pre-eclampsia. Despite this knowledge, therapies for placental angiogenesis recovery during pathological pregnancies are far to be tested. However, from the cardiovascular field, it has been described the administration of EPC, alone or used as gene-transfer therapy; or it has been described the potential role of statins (HMGCoA inhibitors), or angiotensin-converter enzyme (ACE) inhibitors for enhancing angiogenesis. Finally, fetoplacental tissue is an exceptional source of progenitor and stem cells, which could be used for treated other human diseases such as stroke, myocardial infarction, hypertension, or even cancer. In this research topic, authors highlight physiopathological and clinical importance of the impaired placental angiogenesis, and suggest potential targets for developing innovative therapies.

The Yearbook on Space Policy, edited by the European Space Policy Institute (ESPI), is the reference publication analysing space policy developments. Each year it presents issues and trends in space policy and the space sector as a whole. Its scope is global and its perspective is European. The Yearbook also links space policy with other policy areas. It highlights specific events and issues, and provides useful insights, data and information on space activities. The first part of the Yearbook sets out a comprehensive overview of the economic, political, technological and institutional trends that have affected space activities. The second part of the Yearbook offers a more analytical perspective on the yearly ESPI theme and consists of external contributions written by professionals with diverse backgrounds and areas of expertise. The third part of the Yearbook carries forward the character of the Yearbook as an archive of space activities. The Yearbook is designed for government decision-makers and agencies, industry professionals, as well as the service sectors, researchers and scientists and the interested public. Numerous jurisdictions worldwide have augmented their ratification of the New York Convention of 1958 with the UNCITRAL Model Law 1985 (UML), which takes a giant step forward toward global uniformity in legal application and understanding of the arbitration process. This book develops a standard or benchmark for the UML objective of uniformity, using the relevant legislation and case law of Hong Kong, Singapore, and Australia to consider whether a uniform approach to implementation of the UML and its interpretation is being achieved across those jurisdictions. The author's methodological tools are eminently adaptable to other jurisdictions. Given the importance of the ability to set aside an arbitral award, the body of case law on setting aside and the directly related area of enforcement, the emphasis throughout is on Article 34. In addition, the study considers: - the meaning of uniformity in law and in the context of the UML; - the correct approach to interpretation of the UML pre and post Article 2A; - the interpretational relationship between the UML and the Convention on Contracts for the International Sale of Goods (CISG); - the relationship between the UML and the New York Convention; - the degree of textual uniformity of Article 34 with the three jurisdictions focused on; and - the degree of applied uniformity of Article 34 both in terms of juristic methodology and similarity of results. The author, with more than thirty years of practice in the field of commercial arbitration in Hong Kong, has had access to voluminous cases spanning decades and brings his specialist expertise to the subject. This book considers whether the UML has succeeded in its aim of achieving uniformity. It serves as a guide, both academic and practical, to exploring and adopting the correct approach to the interpretation of the UML as well as to the method of classification of court decisions under the UML. This study is of immeasurable academic and practical value.

Nutritional requirements vary greatly according to age and lifestyle. This evidence-based, comprehensive text is a complete guide to eating habits across age and population groups. It provides the recommendations for intakes of nutrients and foods, and diet to achieve optimum health. Chapters systematically examine the nutritional issues for individuals from preconception, pregnancy and breastfeeding through to adulthood and old age. The text features an overview of dietary patterns by age group based on national scientific survey data together with the latest recommendations for optimum nutrition to maintain well-being and address specific health concerns. The final section examines nutrition issues for specific populations including indigenous groups, athletes and the disadvantaged. Throughout the text, key points are illustrated by case studies and the reader's knowledge is tested via quizzes and study questions. With chapters from leading nutrition researchers and educators in Australia, New Zealand and Asia, this is an excellent introduction to nutrition through the lifespan. 'A comprehensive overview and detailed discussion of food and nutrition topics for all ages and stages of life.' - Robynne Snell, Curtin University From consumer products to architecture to advertising to digital technology, design is an undeniably global phenomenon. Yet despite their professed transnational perspective, historical studies of design have all too often succumbed to a bias toward Western, industrialized nations. This diverse but rigorously curated collection recalibrates our understanding of design history, reassessing regional and national cultures

while situating them within an international context. Here, contributors from five continents offer nuanced studies that range from South Africa to the Czech Republic, all the while sensitive to the complexities of local variation and the role of nation-states in identity construction. This comprehensive handbook, prepared by leading ocean policy academics and practitioners from around the world, presents in-depth analyses of the experiences of fifteen developed and developing nations and four key regions of the world that have taken concrete steps toward cross-cutting and integrated national and regional ocean policy. All chapters follow a common framework for policy analysis. While most coastal nations of the world already have a variety of sectoral policies in place to manage different uses of the ocean (such as shipping, fishing, oil and gas development), in the last two decades, the coastal nations covered in the book have undertaken concerted efforts to articulate and implement an integrated, ecosystem-based vision for the governance of ocean areas under their jurisdiction. This includes goals and procedures to harmonize existing uses and laws, to foster sustainable development of ocean areas, to protect biodiversity and vulnerable resources and ecosystems, and to coordinate the actions of the many government agencies that are typically involved in oceans affairs. The book highlights the serious conflicts of use in most national ocean zones and the varying attempts by nations to follow the prescriptions emanating from the 1982 UN Law of the Sea Convention and the outcomes of the 1992, 2002, and 2012 sustainable development summits. The interrelationship among uses and processes in the coast and ocean requires that ocean governance be integrated, precautionary, and anticipatory. Overall, the book provides a definitive state-of-the-art review and analysis of national and regional ocean policies around the world. Highly emotional events tend to be well remembered. The adaptive value in this is clear - those events that have a bearing on survival should be stored for future use as long-term memories whereas memories of inconsequential events would not as likely contribute to future survival. Enduring changes in the structure and function of synapses, neural circuitry, and ultimately behavior, can be modulated by highly aversive or rewarding experiences. In the last decade, the convergence of cellular, molecular, and systems neuroscience has produced new insights into the biological mechanisms that determine whether a memory will be stored for the long-term or lost forever. This Research Topic brings together leading experts, who work at multiple levels of analysis, to reveal recent discoveries and concepts regarding the synaptic mechanisms of consolidation and extinction of emotionally arousing memories. Over the period December 2011-July 2013 a tidal wave of mass protests swept through the Russian Capital and engulfed scores of cities and regions. This fascinating book examines the rise and fall of the non-systemic opposition and the role of the systemic political opposition during this turbulent period. Leading experts in the field from Russia along with scholars from the UK and the US reflect on the conditions that have made large-scale protests possible, the types of people who have taken part and the goals of the opposition movement at both the national and regional levels. This book's analyses how transnational gas markets have evolved and impacted on EU-Russia energy relations. It examines how the political conflict surrounding Ukraine has accelerated a negative interdependence in the region, with energy interdependence increasingly used as an instrument of diplomacy. This ground-breaking collection reflects the growing momentum of interest in the international legal community in meshing the insights of queer legal theory with those critical theories that have a much longer genealogy - notably postcolonial and feminist analyses. Beyond the push in the human rights field to ensure respect for the rights of people with diverse sexual orientations and gender identities, queer legal theory provides a means to examine the structural assumptions and conceptual architecture that underpin the normative framework and operation of international law, highlighting bias and blind spots and offering fresh perspectives and practical innovations. The contributors to the book use queer legal theory to critically analyse the basic tenets and operations of international law, with many surprising, thought-provoking and instructive results. The volume will be of interest to many scholars, students and researchers in international law, international relations, cultural studies, gender studies, queer studies and postcolonial studies. Should the European Neighbourhood Policy stop at the borders of the European Union's immediate neighbouring countries? This book is the first full length study of the 'neighbours of the EU's neighbours', a concept originally introduced by the European Commission with reference to Saharan Africa, the Middle East and Central Asia. These regions in the EU's broader neighbourhood are often perceived as an 'arc of crisis' from which manifold challenges emanate for Europe. This timely book takes stock of the state of the EU's cooperation with the neighbours of its neighbours and explores how the concept might help promote security, stability and prosperity beyond the countries which are formally part of the European Neighbourhood Policy. How can the EU create bridges between these regions? What instruments does the EU have at its disposal and how can it link them in order to respond to the challenges and overcome the current fragmentation? One of the conclusions is the suggestion to consider a pragmatic 'EU Strategy for the Neighbours of its Neighbours' which addresses the needs of the broader EU neighbourhood in a more systematic and consistent manner and helps transform in the long run the 'arc of crisis' into another 'ring of friends'. Microglial cells play a vital role in the innate immune response occurring in the Central Nervous System (CNS). Under physiologic conditions, microglia dynamically patrol the brain parenchyma and participate in the remodeling of active neuronal circuits. Accordingly, microglia can boost synaptic plasticity by removing apoptotic cells and by phagocytizing axon terminals and dendritic spines that form inappropriate neural connections. Upon brain and spinal cord injury or infection, microglia act as the first line of immune defense by promoting the clearance of damaged cells or infectious agents and by releasing neurotrophins and/ or proneurogenic factors that support neuronal survival and regeneration. Recently, two main pathways were suggested for microglia activation upon stimuli. Classical activation is induced by Toll-like receptor agonists and Th1 cytokines and polarizes cells to an M1 state, mainly leading to the release of TNF-alpha, IL-6 and nitric oxide and to grave neural damage. Alternative activation is mediated by Th2 cytokines and polarizes cells to an M2a state inducing the release of antiinflammatory factors. These findings have further fueled the discussion on whether microglia has a detrimental or beneficial action (M1 or M2-associated phenotypes, respectively) in the diseased or injured CNS and, more importantly, on whether we can shift the balance to a positive outcome. Although microglia and macrophages share several common features, upon M1 and M2 polarizing conditions, they are believed to develop distinct phenotypic and functional properties which translate into different patterns of activity. Moreover, microglia/macrophages seem to have developed a tightly organized system of maintenance of CNS homeostasis, since cells found in different structures have different morphology and specific function (e.g. meningeal macrophages, perivascular macrophages, choroid plexus macrophages). Nevertheless, though substantial work has been devoted to microglia function, consensus around their exact origin, their role during development, as well as the exact nature of their interaction with other cells of the CNS has not been met. This issue discusses how microglial cells sustain neuronal activity and plasticity in the healthy CNS as well as the cellular and molecular mechanisms developed by microglia in response to injury and disease. Understanding the mechanisms involved in microglia actions will enforce the development of new strategies to promote an efficient CNS repair by committing microglia towards neuronal survival and regeneration. Since publication of the 1st edition in 2002, there has been a deep evolution of the global communication network with the entry of submarine cables in the Terabit era. Thanks to optical technologies, the transmission on a single fiber can achieve 1 billion simultaneous phone calls across the ocean! Modern submarine optical cables are fueling the global internet backbone, surpassing by far all alternative techniques. This new edition of Undersea Fiber Communication Systems provides a detailed explanation of all technical aspects of undersea communications systems, with an emphasis on the most recent breakthroughs of optical submarine cable technologies. This fully updated new edition is the best resource for demystifying enabling optical technologies, equipment, operations, up to marine installations, and is an essential reference for those in contact with this field. Each chapter of the book is written by key experts of their domain. The book assembles in a complementary way the contributions of authors from key suppliers acting in the domain, such as Alcatel-Lucent, Ciena, NEC, TE-Subcom, Xtera, from consultant and operators such as Axiom, OSI, Orange, and from University and organization references such as TelecomParisTech, and Suboptic. This has ensured that the overall topics of submarine telecommunications is treated in a quite ecumenical, complete and un-biased approach. Features new content on: Ultra-long haul submarine transmission technologies for telecommunications Alternative submarine cable applications, such as scientific or oil and gas Addresses the development of high-speed networks for multiplying Internet and broadband services with: Coherent optical technology for 100Gbit/s channels or above Wet plant optical networking and configurability Provides a full overview of the evolution of the field conveys the strategic importance of large undersea projects with: Technical and organizational life cycle of a submarine network Upgrades of amplified submarine cables by coherent technology A secure supply of energy is essential for all nations, to sustain their economy, and indeed their very survival. This subject is especially important in the case of China, as China's booming economy and consequent

demand for energy is affecting the whole world, and in turn potentially driving realignments in international relations. Moreover, as this book argues, energy security should be considered more broadly, to include issues of sustainability, environmental protection and the domestic organisation of energy policy and energy supply. This book presents a comprehensive picture of China's energy security. It covers all energy sectors - coal, oil, gas, renewables; international relations with all major sources of energy supply - the Middle East, Central Asia, Africa; and key areas of domestic policy making and supply. This volume brings together a selection of papers proposed for the Proceedings of the 42nd Computer Applications and Quantitative Methods in Archaeology conference (CAA), hosted at Paris 1 Pantheon-Sorbonne University from 22nd to 25th April 2014. This book investigates new enabling technologies for Fi-Wi convergence. The editors discuss Fi-Wi technologies at the three major network levels involved in the path towards convergence: system level, network architecture level, and network management level. The main topics will be: a. At system level: Radio over Fiber (digitalized vs. analogic, standardization, E-band and beyond) and 5G wireless technologies; b. Network architecture level: NGPON, WDM-PON, BBU Hotelling, Cloud Radio Access Networks (C-RANs), HetNets. c. Network management level: SDN for convergence, Next-generation Point-of-Presence, Wi-Fi LTE Handover, Cooperative MultiPoint. This collection explores the concepts and practices of masquerade as they apply to concepts and practices of war. The contributors insist that masquerades are everyday aspects of the politics, praxis, and experiences of war, while also discovering that finding masquerades and tracing how they work with war is hardly simple. With a range of theories, innovative methodologies, and contextual binoculars, masquerade emerges as a layered and complex phenomenon. It can appear as state deception, lie, or camouflage, as in the population-centric American warfare in Iraq that was sold as good for the local people, or the hidden violence Russian military forces used on each other and on local men in Chechnya. Masquerade can also be part of a people's war logic as exemplified by the Maoist movement in India. Yet masquerade can also be understood as a normal social mask that people don to foreground an identity or belief from one's cluttered repertoire in order to gain agency. Elements of masquerade can appear in texts that proclaim seemingly unequivocal positions while simultaneously yet subtly suggesting opposing positions. Masquerades of all kinds also seem ubiquitous in fieldwork research and in resistance movements in war zones. Perhaps masquerade, though, is ultimately the denial of death lurking behind the clarion call of security, a call that bolsters war by making militarized policing normal to secure populations from terrorists. These interpretations and others comprise Masquerades of War. This book will be of much interest to students of critical war studies, critical security, conflict studies and IR in general. Most people in most countries have been steadily better in human development. Advances in technology and incomes hold ever-greater for longer, healthier, more secure lives. This study examines the history and politics of Turkey-EU relations since 1959, exploring the complex interaction of geostrategic and normative concerns which have resulted in the current lack of accession progress and Turkey's slide to authoritarianism. The brief description of tumours being "wounds that do not heal" by Dr Harold F. Dworak nearly three decades ago (N Engl J Med 1986) has provided not only a vivid illustration of neoplastic diseases in general but also, in retrospect conceptually, a plausible immunological definition of cancers. Based on our current understanding in the field, it could have even a multi-dimensional meaning attached with. This relates to several important issues which need to be addressed further, i.e. in terms of a close link between chronic inflammation and tumorigenesis widely observed; clinical and experimental evidence of immunity against tumours versus the highly immunosuppressive tumour microenvironment being associated; and their underlying immunological mechanisms, oncogenic basis, as well as the true causal relationship in question. Recent findings from studies into the pathogenesis of autoimmunity and, more importantly, the mechanisms which protect against it, have offered some new insights for our understanding in this direction. Chronic or persistent autoimmune-like inflammatory conditions are evidently associated with tumor development. The important question is about their true causal relationship. Chronic or persistent inflammation has been shown to contribute directly to tumour development by triggering neoplastic transformation and production of inflammatory mediators which could promote cancer cell survival, proliferation and invasion. On the other hand, tumours are mutated self-tissue cells to which the host immune system is largely tolerized otherwise. Although the mutations may give rise to the expression of tumour-specific antigens (TSA) or tumour-associated antigens (TAA), most of these TSAs/TAAs are found to be poor immunogens. The ongoing inflammatory conditions may therefore reflect a desperate attempt of the host immune system to mount anti-tumour responses, though ineffectively, being a consequence of the continuous yet largely futile triggering by those poorly immunogenic TSAs/TAAs. Furthermore, during autoimmune or overtly persistent immunological responses, many regulatory mechanisms are triggered in the host in attempts to limit the ongoing harmful inflammatory reactions. Such a negative feedback regulation is known to be crucial in preventing normal individuals from immune-mediated diseases. As a result of the negative feedback loop, however, an excessive production of anti-inflammatory or immunosuppressive molecules followed by the exhaustion of the immune effector cells may instead lower the ability of the host immune system to mount specific anti-tumor responses, allowing the escape of tumour or mutated cells from immunosurveillance. This may also help to explain why the most effective way to enhance host immunity against cancer is by targeting the negative arm of immune regulation. In this Frontiers Research Topic, we aim to gather current views from experts in these inherent overlapping fields of oncology, autoimmunity and tumour immunology, and to make them available to our potential readership who may be particularly interested in this cutting-edge area. By understanding how the immune system is normally regulated, why dysregulation of which may cause the immunological-oncological related diseases, we also encourage further discussions as to how the so-called "self-reactivity" (autoimmune responses) can be alternatively switched on and redirected, immunologically or molecularly, for effective cancer treatment. This book focuses on a novel phenomenon named photon breeding. It is applied to realizing light-emitting diodes and lasers made of indirect-transition-type silicon bulk crystals in which the light-emission principle is based on dressed photons. After presenting physical pictures of dressed photons and dressed-photon phonons, the principle of light emission by using dressed-photon phonons is reviewed. A novel phenomenon named photon breeding is also reviewed. Next, the fabrication and operation of light emitting diodes and lasers are described. The role of coherent phonons in these devices is discussed. Finally, light-emitting diodes using other relevant crystals are described and other relevant devices are also reviewed. Online auctions have undergone many transformations and continue to attract millions of customers worldwide. However these popular platforms remain understudied by legal scholars and misunderstood by legislators. This book explores the legal classification of online auction sites across a range of countries in Europe. Including empirical studies conducted on 28 online auction websites in the UK, the research focusses on the protection of consumers' economic rights and highlights the shortcomings that the law struggles to control. With examinations into important developments, including the Consumer Rights Directive and the latest case law from the CJEU on the liability of intermediaries, Riefa anticipates changes in the law, and points out further changes that are needed to create a safe legal environment for consumers, whilst preserving the varied business model adopted by online auction sites. The study provides insights into how technical measures as well as a tighter legislative framework or enforcement pattern could provide consumers with better protection, in turn reinforcing trust, and ultimately benefiting the online auction platforms themselves. This book is a study of the role of cultural and heritage networks and how they can help institutions and their host societies manage the tensions and realise the opportunities arising from migration. In looking at past and emerging challenges of social inclusion and cultural dialogue, hybrid models of cultural identity, citizenship and national belonging, the study also sets out to answer the questions 'how'. How can cultural institutions leverage the power of cross-border networks in a contested place such as Europe today? How could they elaborate approaches and strategies based on cultural practices? How can the actions of the European Commission and relevant cultural bodies be strengthened, adapted or extended to meet these goals? Cultural Networks in Migrating Heritage will be of interest to scholars and students in museum and cultural heritage studies, visual arts, sociology of organisations and information studies. It will also be relevant to practitioners and policymakers from museums, libraries, NGOs and cultural institutions at large. Epigenetics is defined as the study of modifications of the genome, heritable during cell division that does not involve changes in DNA sequences. Up to date, epigenetic modifications involve at least three general mechanisms regulating gene expression: histone modifications, DNA methylation, and non-coding RNAs (ncRNAs). For the past two decades, an explosion in our interest and understanding of epigenetic mechanisms has been seen. This mainly based on the influence that epigenetic alterations have on an amazing number of biological processes, such as gene expression, imprinting, programmed DNA rearrangements, germ line silencing, developmentally cued stem cell division, and overall chromosomal stability and identity. It has become also evident that the constant exposure of living organisms to environment factors affects their

genomes through epigenetic mechanisms. Viruses infecting animal cells are thought to play central roles in shaping the epigenetic scenario of infected cells. In this context it has become obvious that knowing the impact that viral infections have on the epigenetic control of their host cells will certainly lead to a better understanding of the interplay viruses have with animal cells. In fact, DNA viruses use host transcription factors as well as epigenetic regulators in such a way that they affect epigenetic control of gene expression that extends to host gene expression. At the same time, animal cells employ mechanisms controlling transcription factors and epigenetic processes, in order to eliminate viral infections. In summary, epigenetic mechanisms are involved in most virus-cell interactions. We now know that some viruses exhibit epigenetic immune evasion mechanisms to survive and propagate in their host; however, there is still much ambiguity over these epigenetic mechanisms of viral immune evasion, and most of the discovered mechanisms are still incomplete. Other animal viruses associated to cancer often deregulate cellular epigenetic mechanisms, silencing cellular tumor-suppressor genes and/or activating either viral or host cell oncogenes. In addition, in several cancers the down-regulation of tumor suppressor protein-coding genes and ncRNAs with growth inhibitory functions, such as miRNAs, have been closely linked to the presence of cell CpG island promoter hypermethylation. The goal of the aforementioned Research Topic is to bring together the key experimental and theoretical research, linking state-of-the-art knowledge about the epigenetic mechanisms involved in animal virus-cell interactions. This book discusses issues such as global financial crisis and global governance, food security, energy sustainability, the global financial system, trade and protectionism, and growth and employment. Since the outbreak of the financial as well as national debt crises in the Euro zone, the focus of the G20 has shifted back to addressing short-term issues. These issues range from the dynamic effects of global imbalances and the appropriate degree of financial sector regulation to questions of austerity versus growth and the lack of a comprehensive framework for managing the international monetary system. A further issue is the relevance of the G20 agenda for emerging market economies. Global economic recovery still remains fragile and downside risks to global growth remain. Additionally, much of the agenda of the Seoul Development Consensus for shared growth launched in 2010 has yet to be fulfilled. A key discussion point in the book, therefore, is how to make a tangible and significant difference in peoples' lives by implementing an agenda of inclusive growth. The Paris Agreement fundamentally alters the reach and scope of the international climate change regime. This book provides the first legal commentary to the Agreement's articles, putting them in context and detailing how they are to be understood and put into action. This book constitutes the proceedings of the First International Conference on Future Access Enablers for Ubiquitous and Intelligent Infrastructures, FABULOUS 2015, held in Ohrid, Republic of Macedonia, in September 2015. The 39 revised papers cover the broad areas of future wireless networks, ambient and assisted living, smart infrastructures and security and reflect the fast developing and vibrant penetration of IoT technologies in diverse areas of human life. There are a multitude of UN legal instruments which pertain to the rights of freedom of expression and information, and this book is the first to comprehensively map them and their function. It details the chequered history of both rights within the UN system and evaluates the suitability of the system for overcoming contemporary challenges and threats to the rights. Leading scholars address key issues, such as how the rights to freedom of expression and information can come into conflict with other human rights and with public policy goals, such as counter-terrorism. The book's institutional focus comprises five international treaties, UNESCO and the UN Special Rapporteur on freedom of expression. Relevant for academics, lawyers, policy-makers and civil society actors, it also examines how new communication technologies have prompted fresh thinking about the substance and scope of the rights to freedom of expression and information. Starting in the early 1990s many emerging and developing economies (EDEs) liberalized their capital accounts, allowing greater freedom for international lenders and investors to enter their markets as well as for their residents to borrow and invest in international financial markets. Despite recurrent crises, liberalization has continued and in fact accelerated in the new millennium. Integration has been greatly facilitated by progressively looser monetary policy in the United States, notably the policies that culminated in debt crises in the United States and Europe and the ultra-easy monetary policy adopted in response. Not only have their traditional cross-border linkages been deepened and external balance sheets expanded rapidly, but also foreign presence in their domestic financial markets and the presence of their nationals in foreign markets have reached unprecedented levels. As a result new channels have emerged for the transmission of financial shocks from global boom-bust cycles. Almost all EDEs are now vulnerable irrespective of their balance-of-payments, external debt, net foreign assets and international reserve positions although these play an important role in the way such shocks could impinge on them. This is a matter for concern since the multilateral system still lacks mechanisms for orderly resolution of financial crises with international dimensions. *Playing with Fire* provides an empirical account of deeper integration of EDEs into the global financial system and discusses its implications for stability and growth, focusing on the role of policies in the new millennium in both EDEs and the United States and Europe.

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