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LAMBERT DARRYL

Converting Power into Chemicals and Fuels Springer
th th The 20 International Conference on Chemical Education (20 ICCE), which had rd th “Chemistry in the ICT Age” as the theme, was held from 3 to 8 August 2008 at Le Méridien Hotel, Pointe aux Piments, in Mauritius. With more than 200 participants from 40 countries, the conference featured 140 oral and 50 poster presentations. th Participants of the 20 ICCE were invited to submit full papers and the latter were subjected to peer review. The selected accepted papers are collected in this book of proceedings. This book of proceedings encloses 39 presentations covering topics ranging from fundamental to applied chemistry, such as Arts and Chemistry Education, Biochemistry and Biotechnology, Chemical Education for Development, Chemistry at Secondary Level, Chemistry at Tertiary Level, Chemistry Teacher Education, Chemistry and Society, Chemistry Olympiad, Context Oriented Chemistry, ICT and Chemistry Education, Green Chemistry, Micro Scale Chemistry, Modern Technologies in Chemistry Education, Network for Chemistry and Chemical Engineering Education, Public Understanding of Chemistry, Research in Chemistry Education and Science Education at Elementary Level. We would like to thank those who submitted the full papers and the reviewers for their timely help in assessing the papers for publication. th We would also like to pay a special tribute to all the sponsors of the 20 ICCE and, in particular, the Tertiary Education Commission (http://tec.intnet.mu/) and the Organisation for the Prohibition of Chemical Weapons (http://www.opcw.org/) for kindly agreeing to fund the publication of these proceedings.
Organic Chemistry Springer Nature
Since the third edition of this reference was completed, there have been major changes in the global chemical industry. With less emphasis on new processes for making basic chemicals and more emphasis on pollution prevention and waste disposal, petrochemical processes are giving way to biochemical processes. These changes are reflected in the new p
Education, Industry and Technology Springer
This 3-to-4 week laboratory module introduces students to the practice of risk assessment in the context of organochlorine pesticides in food. The chemical concepts covered include structure/solubility relationships of organic compounds, gas chromatography, biodegradation, bioaccumulation, and organic extraction techniques. In the final assignment, two groups of students (the agribusiness group and environmentalists) stage a debate over the use of pesticides. Annotation copyrighted by Book News, Inc., Portland, OR
Chemistry Education in the ICT Age John Wiley & Sons
A comprehensive textbook on petrochemical conversion processes for petroleum and natural gas fractions as produced by refinery operations This innovative textbook provides essential links between the chemical sciences and chemical technology, between petrochemistry and hydrocarbon technology. The book brings alive key concepts forming the basis of chemical technology and presents a solid background for innovative process development. In all chapters, the processes described are accompanied by simplified flow schemes, encouraging students to think in terms of conceptual process designs. Petrochemistry: Petrochemical Processing, Hydrocarbon Technology and Green Engineering introduces students to a variety of topics related to the petrochemical industry, hydrocarbon processing, fossil fuel resources, as well as fuels and chemicals conversion. The first chapter covers the fundamentals and principals for designing several of the processes in the book, including discussions on thermodynamics, chemical kinetics, reactor calculations, and industrial catalysts. The following chapters address recent advances in hydrocarbon technology, energy technology, and sources of hydrocarbons. The book then goes on to discuss the petrochemical industry based on four basic pillars, all derived from petroleum and natural gas: Production of lower alkenes; other sources of lower alkenes; petrochemicals from C2-C3 alkenes Production of BTX aromatics; chemicals from BTX aromatics C1 technology Diversification of petrochemicals The growing importance of sustainable technology, process intensification and addressing greenhouse gas emissions is reflected throughout the book. Written for advanced students working in the areas of petrochemistry, hydrocarbon technology, natural gas, energy materials and technologies, alternative fuels, and recycling technologies the book is also a valuable reference for industrial practitioners in the oil and gas industry.
Chemical Engineering Design National Academies Press
Zusammenfassung: This is an open access book. The Organizing Committee of the Conference is delighted to invite you to participate in the 2nd International Conference on Mathematics, Science, and Technology Education (AICMSTE) 2023, which is expected to be held September 18-19, 2023, at Universitas Syiah Kuala, Banda Aceh, Indonesia. This year, the conference is hybrid to reach a larger international audience and diversity. This is a hybrid conference to reach a larger international audience and diversity. We look forward to meeting you in Banda Aceh
Chemistry Education Springer
This book presents contributions submitted to the 2nd international conference Going Global through Social Sciences and Humanities (GGSSH 2019) held in Tomsk, Russia on 27–28 February 2019. The conference focused on such issues as interdisciplinary pedagogy, language teaching and learning, cultural studies and linguistics, particularly highlighting global academic integration and professional development for research. As such, the event provided a platform for discussions and sharing publication activities, to help Russian academics to take first steps toward global research. Showcasing the ongoing Russian research in focus areas, this book is of interest to a diverse academic audience working in social sciences and humanities, particularly those from the post-Soviet countries.
A Short Course in Organic Chemistry John Wiley & Sons
Teaching Chemistry in Higher Education celebrates the contributions of Professor Tina Overton to the scholarship and practice of teaching and learning in chemistry education. Leading educators in United Kingdom, Ireland, and Australia—three countries where Tina has had enormous impact and

influence—have contributed chapters on innovative approaches that are well-established in their own practice. Each chapter introduces the key education literature underpinning the approach being described. Rationales are discussed in the context of attributes and learning outcomes desirable in modern chemistry curricula. True to Tina's personal philosophy, chapters offer pragmatic and useful guidance on the implementation of innovative teaching approaches, drawing from the authors' experience of their own practice and evaluations of their implementation. Each chapter also offers key guidance points for implementation in readers' own settings so as to maximise their adaptability. Chapters are supplemented with further reading and supplementary materials on the book's website (overtonfestschrift.wordpress.com). Chapter topics include innovative approaches in facilitating group work, problem solving, context- and problem-based learning, embedding transferable skills, and laboratory education—all themes relating to the scholarly interests of Professor Tina Overton. About the Editors: Michael Seery is Professor of Chemistry Education at the University of Edinburgh, and is Editor of Chemistry Education Research and Practice. Claire Mc Donnell is Assistant Head of School of Chemical and Pharmaceutical Sciences at Technological University Dublin. Cover Art: Christopher Armstrong, University of Hull

Which Degree Directory Series Elsevier

Education, Industry and Technology is a result of a conference in Bangalore, which discusses industrial and technological issues in primary school science and other related topics. This text specifically examines building applications into secondary science curricula and strategies for teaching science, including the use of games and simulations, work experience programs, industrial visits, and methods of promoting technology as the means for solving problems. The needs of industry and the role of tertiary institutions in development are also some of the highlights of this text. This book will be very helpful to educators and government administrators assigned to advance education.

General, Organic, and Biological Chemistry John Wiley & Sons

Intro -- Technology-Enabled Blended Learning Experiences for Chemistry Education and Outreach -- Copyright -- Contents -- Contributors -- Editors' biography -- Prologue -- Preface -- Acknowledgments -- Section 1: Foundations in technology-enabled blended learning experiences -- Chapter 1: Theoretical background on technology-enabled learning from an instructional designer's point of view -- Introduction -- Why do we need an instructional designer? -- Theoretical background -- The ADDIE model (Analysis, Design, Development, Implementation, Evaluation) -- Training facilities -- Blended learning approach -- MOOC (Massive Open Online Courses) -- Designing a blended learning module -- Evaluation of learning/evaluation of devices -- Tools of the training devices -- Application -- Case study number 1: MOOC -- MOOC at the faculty of medicine -- Experience feedbacks -- An MOOC on public health: What for? -- A MOOC on public health: The feasibility study -- Designing the MOOC -- Evaluation of the MOOC (key figures) -- Engagement of the participants per week and per section -- Engagement of the participants (quizzes) -- Evaluation of the MOOC -- Sociodemographic questions (gender, education, and country of origin) -- General questions on the comprehension of the MOOC -- Questions on the pedagogical aspects of the MOOC -- Conclusion -- Case study number 2 -- Description of the project -- Conclusion -- References -- Further reading -- Chapter 2: Utilizing the power of blended learning through varied presentation styles of lightboard videos -- Introduction -- The blended learning approach -- Computer-based technologies: Video production with the lightboard -- Materials and methods -- Results and discussion -- Interviewer style -- Pros -- Cons -- Multipresenter style -- Pros -- Cons -- Multimedia-enriched style -- Pros -- Cons -- Conclusion -- Acknowledgments.

Petrochemistry Elsevier

This book is aimed at chemistry teachers, teacher educators, chemistry education researchers, and all those who are interested in increasing the relevance of chemistry teaching and learning as well as students' perception of it. The book consists of 20 chapters. Each chapter focuses on a certain issue related to the relevance of chemistry education. These chapters are based on a recently suggested model of the relevance of science education, encompassing individual, societal, and vocational relevance, its present and future implications, as well as its intrinsic and extrinsic aspects. "Two highly distinguished chemical educators, Ingo Eilks and AviHofstein, have brought together 40 internationally renowned colleagues from 16 countries to offer an authoritative view of chemistry teaching today. Between them, the authors, in 20 chapters, give an exceptional description of the current state of chemical education and signpost the future in both research and in the classroom. There is special emphasis on the many attempts to enthuse students with an understanding of the central science, chemistry, which will be helped by having an appreciation of the role of the science in today's world. Themes which transcend all education such as collaborative work, communication skills, attitudes, inquiry learning and teaching, and problem solving are covered in detail and used in the context of teaching modern chemistry. The book is divided into four parts which describe the individual, the societal, the vocational and economic, and the non-formal dimensions and the editors bring all the disparate leads into a coherent narrative, that will be highly satisfying to experienced and new researchers and to teachers with the daunting task of teaching such an intellectually demanding subject. Just a brief glance at the index and the references will convince anyone interested in chemical education that this book is well worth studying; it is scholarly and readable and has tackled the most important issues in chemical education today and in the foreseeable future." – Professor David Waddington, Emeritus Professor in Chemistry Education, University of York, United Kingdom

Which Degree? Elsevier

Two recent initiatives from the EU, namely the Bologna Process and the Lisbon Agenda are likely to have a major influence on European Higher Education. It seems unlikely that traditional teaching approaches, which supported the elitist system of the past, will promote the mobility, widened participation and culture of 'life-long learning' that will provide the foundations for a future knowledge-based economy. There is therefore a clear need to seek new approaches to support the changes which will inevitably occur. The European Chemistry Thematic Network (ECTN) is a network of some 160 university chemistry departments from throughout the EU as well as a number of National Chemical Societies (including the RSC) which provides a discussion forum for all aspects of higher education in chemistry. This handbook is a result of one of their working groups, who identified and collated good practice with respect to innovative methods in Higher Level Chemistry Education. It provides a comprehensive overview of innovations in university chemistry teaching from a broad European perspective. The generation of this book through a European Network, with

major national chemical societies and a large number of chemistry departments as members make the book unique. The wide variety of scholars who have contributed to the book, make it interesting and invaluable reading for both new and experienced chemistry lecturers throughout the EU and beyond. The book is aimed at chemistry education at universities and other higher level institutions and at all academic staff and anyone interested in the teaching of chemistry at the tertiary level. Although newly appointed teaching staff are a clear target for the book, the innovative aspects of the topics covered are likely to prove interesting to all committed chemistry lecturers.

A First Course in Organic Chemistry John Wiley & Sons

Technology-Enabled Blended Learning Experiences for Chemistry Education and Outreach discusses new technologies and their potential for the advancement of chemistry education, particularly in topics that are difficult to demonstrate in traditional 2d media. The book covers the theoretical background of technologies currently in use (such as virtual and augmented reality), introducing readers to the current landscape and providing a solid foundation on how technology can be usefully integrated in both learning and teaching chemistry content. Other sections cover the implementation of technology, how to design a curriculum, and how new tactics can be applied to both outreach and evaluation efforts. Case studies supplement the information presented, providing the reader with practicable examples and applications of covered theories and technologies. Drawing on the broad experiences and unique insights of a global team of authors from a whole host of different backgrounds, the book aims to stimulate readers' creativity and inspire them to find their own novel applications of the techniques highlighted in this volume. Provides detailed information on the theoretical background of technology usage in chemistry education, including discussions of augmented and virtual reality Helps readers understand available options and make informed decisions on how to best utilize technology to enhance their chemistry teaching using concepts surrounding blended learning Presents examples of theory in practice through case studies that detail completed implementations from around the world

Distance & Supported Open Learning Waxmann Verlag

Organic chemistry courses are often difficult for students, and instructors are constantly seeking new ways to improve student learning. This volume details active learning strategies implemented at a variety of institutional settings, including small and large; private and public; liberal arts and technical; and highly selective and open-enrollment institutions. Readers will find detailed descriptions of methods and materials, in addition to data supporting analyses of the effectiveness of reported pedagogies.

Active Learning in Organic Chemistry Elsevier

Chemical Engineering Design, Second Edition, deals with the application of chemical engineering principles to the design of chemical processes and equipment. Revised throughout, this edition has been specifically developed for the U.S. market. It provides the latest US codes and standards, including API, ASME and ISA design codes and ANSI standards. It contains new discussions of conceptual plant design, flowsheet development, and revamp design; extended coverage of capital cost estimation, process costing, and economics; and new chapters on equipment selection, reactor design, and solids handling processes. A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data, and Excel spreadsheet calculations, plus over 150 Patent References for downloading from the companion website. Extensive instructor resources, including 1170 lecture slides and a fully worked solutions manual are available to adopting instructors. This text is designed for chemical and biochemical engineering students (senior undergraduate year, plus appropriate for capstone design courses where taken, plus graduates) and lecturers/tutors, and professionals in industry (chemical process, biochemical, pharmaceutical, petrochemical sectors). New to this edition: Revised organization into Part I: Process Design, and Part II: Plant Design. The broad themes of Part I are flowsheet development, economic analysis, safety and environmental impact and optimization. Part II contains chapters on equipment design and selection that can be used as supplements to a lecture course or as essential references for students or practicing engineers working on design projects. New discussion of conceptual plant design, flowsheet development and revamp design Significantly increased coverage of capital cost estimation, process costing and economics New chapters on equipment selection, reactor design and solids handling processes New sections on fermentation, adsorption, membrane separations, ion exchange and chromatography Increased coverage of batch processing, food, pharmaceutical and biological processes All equipment chapters in Part II revised and updated with current information Updated throughout for latest US codes and standards, including API, ASME and ISA design codes and ANSI standards Additional worked examples and homework problems The most complete and up to date coverage of equipment selection 108 realistic commercial design projects from diverse industries A rigorous pedagogy assists learning, with detailed worked examples, end of chapter exercises, plus supporting data and Excel spreadsheet calculations plus over 150 Patent References, for downloading from the companion website Extensive instructor resources: 1170 lecture slides plus fully worked solutions manual available to adopting instructors

Organic Chemistry University Science Books

This book has been Conceptualized specifically for B.Sc. (Honours) according to the New Syllabus prescribed by Andhra Pradesh State Council of Higher Education (APSCHE). The book seamlessly amalgamates the realms of mathematics, physics and chemistry to offer a holistic view of the in connectedness of these sciences and their significance in solving real-world problems. The book is divided in Five Units that are further divided into the chapters. Unit One Advances in Basics Mathematics commences with an exploration of the methods of finding the equations of types of straight lines. It covers concepts such as slope and gradient of a line. The point slope form of a line, Reduction into the intercept form, Limits and Differentiation, Integration & Matrices. Unit Two Advances in Physics encounter Renewable Energy, Quantum Dots and Communication, Recent Advances in Biophysics and Medical Physics, Shape Memory Materials. Unit Three Advances in Chemistry covers the topics such as Computer Aided Drug Design (CADD) and Delivery, Nano sensors and Chemical Biology, Impact of Chemical Pollutants on Ecosystem and Human Health and Shape Memory Materials. Unit Four covers the Applications of Mathematics, Physics and Chemistry. Unit Five Advances of Computer Science covers the important topics such as Number System - Binary, Octal, Decimal, and Hexadecimal, Signals - Analog and Digital, Modem, Codec, Multiplexing, Transmission Media, Error Detection and Correction - Parity Check and CRC, and Networking Devices - Repeater, Hub, Bridge, Switch, Router, Gateway.

Technology-Enabled Blended Learning Experiences for Chemistry Education and Outreach Royal

Society of Chemistry
A comprehensive guide to full-time degree courses, institutions and towns in Britain.
Chemistry 30A CRC Press
Going green is a hot topic in both chemistry and chemical engineering. Green chemistry is the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances. Green engineering is the development and commercialization of economically feasible industrial processes that reduce the risk to human health and the environment. This book summarizes a workshop convened by the National Research Council to explore the widespread implementation of green chemistry and chemical engineering concepts into undergraduate and graduate education and how to integrate these concepts into the established and developing curricula. Speakers highlighted the most effective educational practices to date and discussed the most promising educational materials and software tools in green chemistry and engineering. The goal of the workshop was to inform the Chemical Sciences Roundtable, which provides a science-oriented, apolitical forum for leaders in the chemical sciences to discuss chemically related issues affecting government, industry, and universities.
Going Global through Social Sciences and Humanities: A Systems and ICT Perspective S. Chand Publishing
As teachers we often tend to expect other countries to teach chemistry in much the same way as we do, but educational systems differ widely. At Bielefeld University we started a project to analyse the approach to chemical education in different countries from all over the world: Teaching Chemistry around the World. 25 countries have participated in the project. The resulting country studies are presented in this book. This book may be seen as a contribution to make the structure of chemistry teaching in numerous countries more transparent and to facilitate communication between these countries. Especially in the case of the school subject chemistry, which is very unpopular on the one hand and occupies an exceptional position on the other hand – due to its relevance to jobs and everyday life and most notably due to its importance for innovation capacity and problem solving – we have to learn from each others' educational systems.
Which Degree in Britain Springer Science & Business Media
Winner of the CHOICE Outstanding Academic Title 2017 Award This comprehensive collection of top-level contributions provides a thorough review of the vibrant field of chemistry education. Highly-experienced chemistry professors and education experts cover the latest developments in chemistry learning and teaching, as well as the pivotal role of chemistry for shaping a more sustainable future. Adopting a practice-oriented approach, the current challenges and opportunities posed by chemistry education are critically discussed, highlighting the pitfalls that can occur in teaching chemistry and how to circumvent them. The main topics discussed include best practices, project-based education, blended learning and the role of technology, including e-learning, and science visualization. Hands-on recommendations on how to optimally implement innovative strategies of teaching chemistry at university and high-school levels make this book an essential resource for anybody interested in either teaching or learning chemistry more effectively, from experience chemistry professors to secondary school teachers, from educators with no formal training in didactics to frustrated chemistry students.
Encyclopedic Dictionary of Named Processes in Chemical Technology Creathach Press
This book features contributions to the XVIIth International Conference "Linguistic and Cultural Studies: Traditions and Innovations" (LKTI 2017), providing insights into theory, research, scientific achievements, and best practices in the fields of pedagogics, linguistics, and language teaching and learning with a particular focus on Siberian perspectives and collaborations between academics from other Russian regions. Covering topics including curriculum development, designing and delivering courses and vocational training, the book is intended for academics working at all levels of education striving to improve educational environments in their context – school, tertiary education and continuous professional development.