

Dispelling Chemical Industry Myths Chemical Engineering

This title looks at how people, as opposed to technology and computers within plants, are arguably the most unreliable factor, leading to dangerous situations.

Organized by Dept. of Chemistry, Univ. of Delhi in Nov. 2003.

Review of previous edition: "Trevor Kletz's book makes an invaluable contribution to the systematic, professional and scientific approach to accident investigation". The Chemical Engineer Fully revised and updated, the third edition of Learning from Accidents provides more information on accident investigation, including coverage of accidents involving liquefied gases, building collapse and other incidents that have occurred because faults were invisible (e.g. underground pipelines). By analysing accidents that have occurred Trevor Kletz shows how we can learn and thus be better able to prevent accidents happening again. Looking at a wide range of incidents, covering the process industries, nuclear industry and transportation, he analyses each accident in a practical and non-theoretical fashion and summarises each with a chain of events showing the prevention and mitigation which could have occurred at every stage. At all times Learning from Accidents, 3rd Edition emphasises cause and prevention rather than human interest or cleaning up the mess. Anyone involved in accident investigation and reporting of whatever sort and all those who work in industry, whether in design, operations or loss prevention will find this book full of invaluable guidance and advice.

Chemistry for Sustainable Technologies

Drug Truths

An Engineer's View of Human Error

Vanity, Vitality, and Virility: The Science Behind the Products You Love to Buy

Chemical Engineering Progress

A Foundation

This book addresses corrosion problems and their solutions at facilities in the oil refining and petrochemical industry, including cooling water and boiler feed water units. Further, it describes and analyzes corrosion control actions, corrosion monitoring, and corrosion management. Corrosion problems are a perennial issue in the oil refining and petrochemical industry, as they lead to a deterioration of the functional properties of metallic equipment and harm the environment – both of which need to be protected for the sake of current and future generations. Accordingly, this book examines and analyzes typical and atypical corrosion failure cases and their prevention at refineries and petrochemical facilities, including problems with: pipelines, tanks, furnaces, distillation columns, absorbers, heat exchangers, and pumps. In addition, it describes naphthenic acid corrosion, stress corrosion cracking, hydrogen damages, sulfidic corrosion, microbiologically induced corrosion, erosion-corrosion, and corrosion fatigue occurring at refinery units. At last, fouling, corrosion and cleaning are discussed in this book.

This book answers the questions about the process and costs of pharmaceutical R & D in a compelling narrative focused on the discovery and development of important new medicines. It gives an insider's account of the pharmaceutical industry drug discovery process, the very real costs of misperceptions about the industry, the high stakes--both economic and scientific--of developing drugs, the triumphs that come when new compounds reach the market and save lives, and the despair that follows when new compounds fail. In the book, John LaMattina, former president of Pfizer Global Research and Development, weaves themes critical to a vital drug discovery environment in the context. This is a story that Dr. LaMattina is uniquely qualified to tell.

Following the success of the first edition, this fully updated and revised book continues to provide an interdisciplinary introduction to sustainability issues in the context of chemistry and chemical technology. Its prime objective is to equip young chemists (and others) to more fully to appreciate, defend and promote the role that chemistry and its practitioners play in moving towards a society better able to control, manage and ameliorate its impact on the ecosphere. To do this, it is necessary to set the ideas, concepts, achievements and challenges of chemistry and its application in the context of its environmental impact, past, present and future, and of the changes needed to bring about a more sustainable yet equitable world. Progress since 2010 is reflected by the inclusion of the latest research and thinking, selected and discussed to put the advances concisely in a much wider setting – historic, scientific, technological, intellectual and societal. The treatment also examines the complexities and additional challenges arising from public and media attitudes to science and technology and associated controversies and from the difficulties in reconciling environmental protection and global development. While the book stresses the central importance of rigour in the collection and treatment of evidence and reason in decision-making, to ensure that it meets the needs of an extensive community of students, it is broad in scope, rather than deep. It is, therefore, appropriate for a wide audience, including all practising scientists and technologists.

Artificial Intelligence in Business, Science, and Industry: Fundamentals

Case Study on the Chemicals Sector

Proceedings

How Organizations Have No Memory and Accidents Recur

Polysaccharides and Polyamides in the Food Industry

Fluid Bed Technology in Materials Processing

Aristocracies or nobilities dominated the social, economic, and institutional history of all European countries until only a few generations ago. The relics of their power, in traditions and behaviour, in architecture and the arts, are still all around us. This short introduction shows how ideas of aristocracy originated in ancient times, were transformed in the middle ages, and have only fallen apart over the last two centuries. The myths in which aristocracies have always sought to shroud themselves are stripped away, but the true sources of their enduring power are also revealed. Their outlook and behaviour affected the rest of society in innumerable and sometimes surprising ways, but perhaps most surprising was the way in which a centuries-old aristocratic hegemony crumbled away over the last two hundred years. In this Very Short Introduction William Doyle considers why this happened and what remains today. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Biocatalysis is rapidly evolving into a key technology for the discovery and production of chemicals, especially in the pharmaceutical industry, where high yielding chemo-, regio-, and enantioselective reactions are critical. Taking the latest breakthroughs in genomics and proteomics into consideration, Biocatalysis for the Pharmaceutical Industry concisely yet comprehensively discusses the modern application of biocatalysis to drug discovery, development, and manufacturing. Written by a team of leading experts, the book offers deep insight into this cutting edge field. Covers a wide range of topics in a systematic manner with an emphasis on industrial applications Provides a thorough introduction to the latest biocatalysts, modern expression hosts, state-of-the-art directed evolution, high throughput screening, and bioprocess engineering Addresses frontier subjects such as emerging enzymes, metabolite profiling, combinatorial biosynthesis, metabolic engineering, and autonomous enzymes for the synthesis and development of chiral molecules, drug metabolites, and semi-synthetic medicinal compounds and natural product analogs Highlights the impact of biocatalysis on green chemistry Contains numerous graphics to illustrate concepts and techniques Biocatalysis for the Pharmaceutical Industry is an essential resource for scientists, engineers, and R&D policy makers in the fine chemical, pharmaceutical, and biotech industries. It is also an invaluable tool for academic researchers and advanced students of organic and materials synthesis, chemical biology, and medicinal chemistry.

Supplying nearly 350 expertly-written articles on technologies that can maximize and enhance the research and production phases of current and emerging chemical manufacturing practices and techniques, this second edition provides gold standard articles on the methods, practices, products, and standards recently influencing the chemical industries. New material includes: design of key unit operations involved with chemical processes; design, unit operation, and integration of reactors and separation systems; process system peripherals such as pumps, valves, and controllers; analytical techniques and equipment; current industry practices; and pilot plant design and scale-up criteria.

Learning from Accidents

Dispelling chemical industry myths

Soap, Cosmetics, Chemical Specialties

Dispelling the Myths and Understanding the Reality of Science

Chemistry and Industry

Choice

With over fifty years of experience in the chemical industry, Trevor Kletz sheds light on statements of doubtful accuracy that are widely accepted among chemical engineers and professionals in the chemical industry. These so-called myths have led to accidents and wrong decisions. This book encourages a skeptical approach so that accidents can be avoided and our resources can be more effectively used. The myths address technology, management, and, new to this edition, toxicology and the environment. Included in each myth is a thorough description of why it is wrong. This important resource provides a gentle reminder that all received wisdom should be looked at critically from time to time. Everyone teaching, learning, and working in the oil, chemical, and other process industries will find the book stimulating and provocative - and relevant to their everyday work.

Trevor Kletz has had a huge impact on the way people viewed accidents and safety, particularly in the process industries. His ideas were developed from nearly 40 years working in the chemical industry. When he retired from the field, he shared his experience and ideas widely in more than 15 books. Trevor Kletz Compendium: His Process Safety Wisdom Updated for a New Generation introduces Kletz's stories and ideas and brings them up to date in this valuable resource that equips readers to manage process safety in every workplace. Topics covered in this book include inherent safety, safety studies, human factors and design. Learn the lessons from past accidents to make sure they don't happen again. Focuses on understanding systems and learning from past accidents Describes approaches to safety that are practical and effective Provides an engineer's perspective on safety

Fluid Bed Technology in Materials Processing comprehensively covers the various aspects of fluidization engineering and presents an elaborate examination of the applications in a multitude of materials processing techniques. This singular resource discusses: All the basic aspects of fluidization essential to understand and learn about various techniques The range of industrial applications Several examples in extraction and process metallurgy Fluidization in nuclear engineering and nuclear fuel cycle with numerous examples Innovative techniques and several advanced concepts of fluidization engineering, including use and applications in materials processing as well as environmental and bio-engineering Pros and cons of various fluidization equipment and specialty of their applications, including several examples Design aspects and modeling Topics related to distributors effects and flow regimes A separate chapter outlines the importance of fluidization engineering in high temperature processing, including an analysis of the fundamental concepts and applications of high temperature fluidized bed furnaces for several advanced materials processing techniques. Presenting information usually

not available in a single source, Fluid Bed Technology in Materials Processing serves Fluidization engineers Practicing engineers in process metallurgy, mineral engineering, and chemical metallurgy Researchers in the field of chemical, metallurgical, nuclear, biological, environmental engineering Energy engineering professionals High temperature scientists and engineers Students and professionals who adopt modeling of fluidization in their venture for design and scale up

Chemist

Biocatalysis for the Pharmaceutical Industry

Can the Pharmaceutical Industry Restore its Broken Image?

The Chemical Engineer

Publication of the Association of College and Research Libraries, a Division of the American Library Association

Devalued and Distrusted

Andre Leu challenges conventional farming methods by refuting the myths that surround the use and understanding of pesticides. He exposes the dangers of these chemicals and advocates organic practices as the most viable for farming in the 21st Century.

How far will an ounce of prevention really go? While the answer to that question may never be truly known, Process Plants: A Handbook for Inherently Safer Design, Second Edition takes us several steps closer. The book demonstrates not just the importance of prevention, but the importance of designing with prevention in mind. It emphasizes the role

This second edition Encyclopedia supplies nearly 350 gold standard articles on the methods, practices, products, and standards influencing the chemical industries. It offers expertly written articles on technologies at the forefront of the field to maximize and enhance the research and production phases of current and emerging chemical manufacturing practices and techniques. This collecting of information is of vital interest to chemical, polymer, electrical, mechanical, and civil engineers, as well as chemists and chemical researchers. A complete reconceptualization of the classic reference series the Encyclopedia of Chemical Processing and Design, whose first volume published in 1976, this resource offers extensive A-Z treatment of the subject in five simultaneously published volumes, with comprehensive indexing of all five volumes in the back matter of each tome. It includes material on the design of key unit operations involved with chemical processes; the design, unit operation, and integration of reactors and separation systems; process system peripherals such as pumps, valves, and controllers; analytical techniques and equipment; and pilot plant design and scale-up criteria. This reference contains well-researched sections on automation, equipment, design and simulation, reliability and maintenance, separations technologies, and energy and environmental issues. Authoritative contributions cover chemical processing equipment, engineered systems, and laboratory apparatus currently utilized in the field. It also presents expert overviews on key engineering science topics in property predictions, measurements and analysis, novel materials and devices, and emerging chemical fields. ALSO AVAILABLE ONLINE This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for both researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact Taylor and Francis for more information or to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367; (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062; (E-mail) online.sales@tandf.co.uk

A Plain-language Guide to Toxicology

Process Plants

Lessons from Disaster

Science Teaching Reconsidered

Chemical Times & Trends

The Dose Makes the Poison

This book covers myths about technology, management, toxicology, and the environment. It helps all who work in the chemical industry and all chemical engineers, including teachers and students to avoid accidents and wrong decisions and use resources more effectively.

Effective science teaching requires creativity, imagination, and innovation. In light of concerns about American science literacy, scientists and educators have struggled to teach this discipline more effectively. Science Teaching Reconsidered provides undergraduate science educators with a path to understanding students, accommodating their individual differences, and helping them grasp the methods--and the wonder--of science. What impact does teaching style have? How do I plan a course curriculum? How do I make lectures, classes, and laboratories more effective? How can I tell what students are thinking? Why don't they understand? This handbook provides productive approaches to these and other questions. Written by scientists who are also educators, the handbook offers suggestions for having a greater impact in the classroom and provides resources for further research.

This series of essays on safety and loss prevention is aimed at helping the process industries avoid accidents and improve its public image. The central message is the apparent inability of organizations to learn, and retain in the long term, the lessons drawn from accidents. Thus incidents of a similar type recur within the same company at intervals of a decade or so, as personnel involved move on to other jobs.

Encyclopedia of Chemical Processing

Hazop & Hazan

Dispelling the Myths About Pharma R & D

Chemical Week

Whitaker's Books in Print

The 11 Myths of Media Violence

This revised edition provides the basics of applying hazard and operability study (Hazop) and hazard analysis (Hazan). Hazop is a creative but systematic method of identifying hazards in process plants. Hazard analysis is then used to quantify the risks from these hazards, and to assess how far to go in reducing them. This book is presented in easy-to-read style and explains: what a Hazop is, who carries it out, when, and how long it should take; points to watch during a Hazop; an example of a Hazop; Hazops on flowsheets; the stages of Hazard analysis; the Fatal Accident Rate; risks to the public; estimating how often an accident will occur, with examples; and pitfalls in Hazan.

Vanity, Vitality, and Virility is a fascinating portrait gallery of chemicals involved in our everyday life, from Viagra and selenium to whispering asphalt, nappies, and chewing gum. While it will not advise you what to do if you want to improve your looks, your health, your peace of mind or your sex life, it explains the science behind many of the products that claim to be able to do just that. Lift the lid on the secrets behind products we use every day with renowned science communicator John Emsley, author of The

Consumer's Good Chemical Guide, Molecules at an Exhibition, and Nature's Building Blocks. - ;Vanity, Vitality, and Virility is a fascinating portrait gallery of chemicals involved in our everyday life, from Viagra and selenium to whispering asphalt, nappies, and chewing gum. While it will not advise you what to do if you want to improve your looks, your health, your peace of mind or your sex life, it explains the science behind many of the products that claim to be able to do just that. Chemistry is too often associated with poisonous gases and strange bubbling solutions, yet it is all around us, and inside us too. Renowned science communicator John Emsley lifts the lid on the secrets inside the products we use every day. -

The 11 Myths of Media Violence clearly explains why media violence has not only been allowed but encouraged to escalate. Esteemed author W. James Potter challenges many of our assumptions about the relationship between media and violence. He argues that these assumptions are the primary barriers preventing us from confronting the issue of violence in films, TV, and video games. Students and scholars of Mass Media, Communications, Film, and Sociology will find The 11 Myths of Media Violence inspires passionate discussion and innovative research. Consumer activists, teachers, and families will find it an essential resource and invaluable step toward finding solutions to this critical social issue.

The Myths of Safe Pesticides

Pesticides and Health: Myths vs. Realities

Discovery, Development, and Manufacturing

The Science Gap

Corrosion Problems and Solutions in Oil Refining and Petrochemical Industry

Polyamides

Examines sixteen standard myths about the nature of science, demonstrating that much of what passes for logical argumentation consists of the repetition of cliches and current folklore.

An expert's view on solving the challenges confronting today's pharmaceutical industry Author John LaMattina, a thirty-year veteran of the pharmaceutical industry and former president of Pfizer's Global R&D Division, is internationally recognized as an expert on the pharmaceutical industry. His first book, Drug Truths: Dispelling the Myths About Pharma R&D, was critically acclaimed for clearing up misconceptions about the pharmaceutical industry and providing an honest account of the contributions of pharmaceutical research and development to human health and well-being. As he toured the country discussing Drug Truths, Dr. LaMattina regularly came across people who were filled with anger, accusing the pharmaceutical industry of making up diseases, hiding dangerous side effects, and more. This book was written in response to that experience, critically examining public perceptions and industry realities. Starting with "4 Secrets that Drug Companies Don't Want You to Know," Devalued and Distrusted provides a fact-based account of how the pharmaceutical industry works and the challenges it faces. It addresses such critical issues as: Why pharmaceutical R&D productivity has declined Where pharmaceutical companies need to invest their resources What can be done to solve core health challenges, including cancer, diabetes, and neurodegenerative diseases How the pharmaceutical industry can regain public trust and resuscitate its image Our understanding of human health and disease grows daily; however, converting science into medicine is increasingly challenging. Reading Devalued and Distrusted, you'll not only gain a greater appreciation of those challenges, but also the role that the pharmaceutical industry currently plays and can play in solving those challenges. Get to know the author: Read an interview with John LaMattina or watch a video on ChemistryViews! http://www.chemistryviews.org/details/ezone/4286441/John_LaMattina_30_Years_in_Pharma.html Interview: John LaMattina: 30 Years in Pharma/a http://www.chemistryviews.org/details/video/4498851/Can_the_Pharmaceutical_Industry_Restore_its_Broken_Image.html Video: Can the Pharmaceutical Industry Restore its Broken Image?/a

Encyclopedia of Chemical Processing (Online)

Who's who in Finance and Industry

Dispelling Chemical Industry Myths

A Handbook for Inherently Safer Design, Second Edition

Chemical & Metallurgical Engineering

Aristocracy: A Very Short Introduction