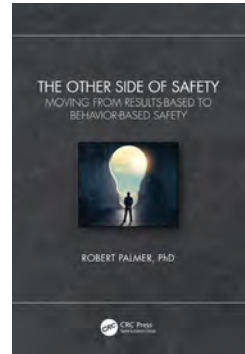


# January 2023 Bookshelf: Recently Published Books for the CPI

December 16, 2022 | By Scott Jenkins, Chemical Engineering magazine

*The following lists recently published books of relevance to the chemical process industries (CPI):*



**The Other Side of Safety: Moving from Results-Based to Behavior-Based.** By Robert Palmer, CRC Press, 2023, 154 pages, \$71.96.

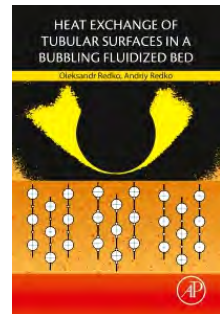
**A New Approach to HAZOP of Complex Chemical Processes.** By Fabienne-Fariba Salimi, Ali Akbar Safavi, Leonhard Urbas and Frederic Salimi, Elsevier Press, 2023, 262 pages, \$127.50.

**Safety and Health for Engineers,** 4<sup>th</sup> edition, By Roger Brauer, John Wiley and Sons Inc., 2022, 672 pages, \$120.00.



**Guidelines for Revalidating a Process Hazard Analysis,** 2<sup>nd</sup> edition. By the Center for Chemical Process Safety, 2022, 240 pages, \$120.00.

**Sulfuric Acid Digestion, Sulfuric Acid Baking, and Sulfation Roasting in Mineral and Chemical Processing, and Extractive Metallurgy.** By Francois Cardarelli, Electrochem Technologies & Materials Inc., 2023, 279 pages, \$123.22.

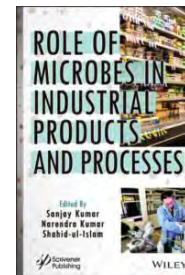


**Heat Exchange of Tubular Surfaces in a Bubbling Fluidized Bed.** By Oleksandr Redko and Andriy Redko, Academic Press, 2023, 286 pages, \$180.00.

**Hydrogen Embrittlement Theory and Prevention of Hydrogen Damage in Metals and Alloys.** By Branko Popov and Milos Djukic, Elsevier Press, 362 pages,

**Guidelines for Managing Abnormal Situations.** By the Center for Chemical Process Safety, 2022, 272 pages, \$120.00.

**Role of Microbes in Industrial Products and Processes.** Edited by Sanjay Kumar, Narendra Kumar and Shahid Ul-Islam, John Wiley and Sons Inc., 2022, 432 pages, \$180.00.



**MSA Gas Detection Handbook,** 9<sup>th</sup> edition. By MSA Safety Inc., self-published, 2022, 155 pages.

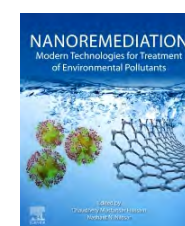
**Data Science for Engineers.** By Raghunathan Rengaswamy and Resmi Suresh, CRC Press, 2022, 360 pages, \$96.00.

**Process Steam Systems: A Practical Guide for Operators, Maintainers, Designers and Educators,** 2<sup>nd</sup> ed., John Wiley and Sons Inc., 2022, 368 pages, \$96.00.

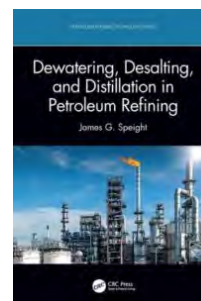


**Moran's Dictionary of Chemical Engineering Practice\*.** By Sean Moran, Elsevier Press, 2022, 650 pages, \$153.00. (\*See Author's Commentary about the writing of this book below)

**Nanoremediation: Modern Technologies for Treatment of Environmental Pollutants.** Edited by Chaudhery Hussain and Nashaat Nassar, Elsevier Press, 2023, 662 pages, \$199.75.



**Dewatering, Desalting, and Distillation in Petroleum Refining.** By James Speight, CRC Press, 2023, 270 pages, \$160.00.



## Author's Commentary

The following comes from the author Sean Moran about the publication of his book "Moran's Dictionary of Chemical Engineering Practice."

## Why Do We Need a Dictionary of Chemical Engineering Practice?

By Sean Moran

What is a squing? How about a schoepentoeter? Do you know the difference between a roughneck and a roustabout? A silo and a hopper? How many 'colors' of hydrogen have you heard of? How many definitions of the word color? What's the difference between availability, dependability, and reliability? And, if you think that you already know, are you aware of how meanings vary between – and even within- industry sectors?

## German large-scale plant engineering grows in a volatile market environment

At €24.3 billion, incoming orders booked in Germany by the members of the VDMA Large-scale Plant Engineering Group (AGAB; Frankfurt...

## 2024 CEPCI updates: February (prelim.) and January (final)

The preliminary value for the CE Plant Cost Index (CEPCI) for February 2024 (most recent available) rose compared to the...

## Production and Demand Challenges for 'Green' Hydrogen

Burgeoning demand for hydrogen to support decarbonization goals is straining existing supply chains for industrial gases and prompting companies to...

## Selecting Mixing Impellers

Presented here is a brief overview of the considerations involved in matching the right impeller with a given application Matching...

## Chementator Briefs

CO2 liquefaction Last month, Linde Engineering (Pullach, Germany; www.linde-engineering.com) signed a contract with Yara International ASA (Oslo, Norway; www.yara.com) to...

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## Job Listings

- Department Chair Computer Science - Florida Polytechnic University - , FL

Austin Community College - Austin, TX

- Faculty, HVAC & Refrigeration - Austin Community College - Austin, TX
- Water Permit Writer - Virginia Dept of Environmental Quality - , VA

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A related difficulty is that many engineers will insist that their preferred meaning for a term is the only correct one. But, if the sole purpose of using terms is to unequivocally transmit meaning, (as so many engineers think it is), then this makes no sense. Only a term with a definition agreed by all parties can truly serve to precisely transmit information. This was the primary reason for deciding to write my latest book, Moran's Dictionary of Chemical Engineering Practice: to improve communication between engineers.

Some important terms used in engineering are defined normatively in codes, standards and guidance documents. This certainly decreases the possibility of misunderstanding if explicit reference is made to the definition source, but it rarely is, and the use of such documents varies geographically and by sector.

## Contested terms

Many engineers work in one sector or one geographical area for their whole careers. Only when they mix with engineers from elsewhere do they find their definitions of terms challenged. Many have gotten quite angry with me simply for stating that in other places or settings, such and such a term has a different meaning, either informally, or through formal definition.

To give a concrete example, let's consider the term "hazard." While legislation may provide slightly different definitions depending on the jurisdiction, a hazard (generally speaking) is a source of potential damage to people, property or environment, and is thus closely associated with risk. The meaning of hazard may however be restricted in the engineering profession to potential sources of harm. Most people agree that harm is something that happens to *people*, whilst damage is something which happens to *property*; and a formal definition along these lines may be found in BS EN ISO 12100:2010.

The hygienic industries tend to define hazard entirely in the context of food safety (the EHEDG Glossary being a key resource in this respect). Process safety (and therefore consideration of damage and harm to people other than consumers) can therefore tend to be a lesser priority than food safety, to the extent that HACCP studies may be believed to render HAZOP studies redundant.

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