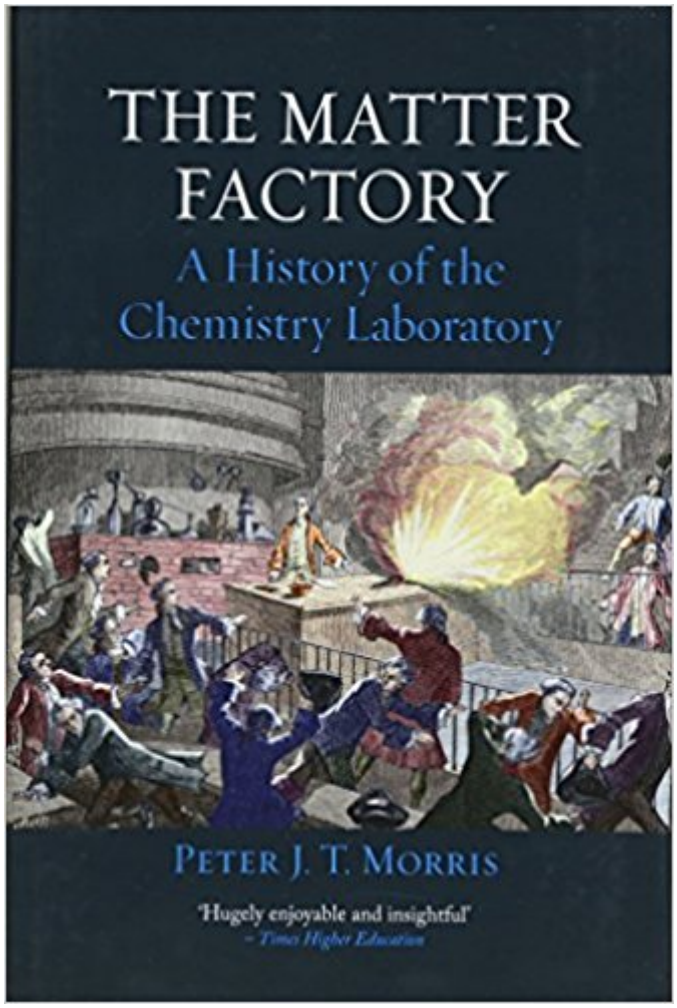
The Matter Factory: A History Of The Chemistry Laboratory



Synopsis

White coats, Bunsen burners, beakers, flasks, and pipettes—the furnishings of the chemistry laboratory are familiar to most of us from our school days, but just how did these items come to be the crucial tools of science? Examining the history of the laboratory, Peter J. T. Morris offers a unique way to look at the history of chemistry itself, showing how the development of the laboratory helped shape modern chemistry. Ã Â Ã Â Ã Â Ã Â Ã Â Ã Â Ã Â Ã Â Ã Â Ã Â Ã Â Chemists, Morris shows, are one of the leading drivers of innovation in laboratory design and technology. He tells of fascinating lineages of invention and innovation, for instance, how the introduction of coal gas into Robert Wilhelm BunsenÃ¢â ¬â„¢s laboratory led to the eponymous burner, which in turn led to the development of atomic spectroscopy. Comparing laboratories across eras, from the furnace-centered labs that survived until the late eighteenth century to the cleanrooms of today, he shows how the overlooked aspects of science—the architectural design and innovative tools that have facilitated its practice—have had a profound impact on what science has been able to do and, ultimately, what we have been able to understand. Ã Â

Book Information

Hardcover: 352 pages

Publisher: Reaktion Books (July 15, 2015)

Language: English

ISBN-10: 1780234422

ISBN-13: 978-1780234427

Product Dimensions: 6 x 1.6 x 9 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 stars 2 customer reviews

Best Sellers Rank: #1,314,968 in Books (See Top 100 in Books) #88 inÃ Â Books > Science & Math > Chemistry > Clinical #6503 inÃ Â Books > Science & Math > History & Philosophy

Customer Reviews

Ã¢â ¬Å“Chemistry was probably the first of the sciences to get a room of its own, and in The Matter Factory, Morris offers the first book-length treatment of how this happened and what has changed in labs over the years. . . . The Matter Factory is the story of the years (and centuries) when chemistry was finding out what it could do. It covers a lot of ground and brings together many old drawings, plans, and photographs that are otherwise scattered through a bewildering literature trail. It should remain the definitive history of the chemistry lab for many years.Ã¢â ¬Â• (Nature)Ã¢â ¬Å“This

lavishly illustrated portrait of the chemistÃ¢â ¬â„¢s workplace provides a vividly written account of the evolution of the contemporary electronic-based laboratory from the workshops of early-modern metallurgists, alchemists, and pharmacists. Using key features such as furnaces, benches, cupboards, bottle racks, and fume cupboards, as well as gas, electricity, and water supplies, Morris shows how the changing character of chemical teaching and research influenced the building and fittings of laboratories in universities, industrial works, and official government laboratories. Text and illustrations combine to make a fresh and exciting way of looking at the history of chemistryÃ¢â ¬â •the science that makes our world.Ã¢â ¬Â• (W. H. Brock, University of Leicester)Ã¢â ¬Å“Arguing that changes in laboratory design were critical to enabling the progress of chemistry, Morris explores the origins and evolution of the chemistry laboratory, from medieval alchemy dens through todayÃ¢â ¬â„¢s state-of-the-art facilities. Rich in detail and featuring an array of engravings, illustrations, and photographs, The Matter Factory is an unusual and engaging history.Ã¢â ¬Â•Ã Â (Science)Ã¢â ¬Å“Surprisingly, there has been no comprehensive history of the chemistry laboratory, an omission put right in The Matter Factory by the distinguished historian, Morris. . . . The Matter Factory succeeds in describing the evolution of the chemistry laboratory. It is highly readable and well-illustrated, including numerous references. As such, it should be widely read by all who have had the privilege of studying and working in a chemistry laboratory.Ã¢â ¬Â• (Chemistry World)Ã¢â ¬Å“Book of the Week. . . . Hugely enjoyable and insightful.Ã¢â ¬Â•Ã Â (Times Higher Education)Ã¢â ¬Å“The Matter Factory is not a history of chemistry, of which there are plenty, but rather a history of the chemistry laboratory, of which there is none. . . . Having himself worked in the pharmaceutical industry and subsequently become a historian of chemistry, Morris is well placed to fill this gap, basing his account on an extensive search for, and analysis of, published illustrations and photographs of laboratories. His book is therefore copiously illustrated with images of both chemistry laboratoriesÃ¢â ¬â •in universities, industry, and governmentÃ¢â ¬â •and portraits of the inorganic and organic chemists who worked in them. . . . Morris has unearthed a rich array of laboratory images. . . . The level of detail in the book is valuable.Ã¢â ¬Â• (The Lancet)Ã¢â ¬Å“In recent years, much attention has been devoted to the protagonists of the history of chemistry, but the evolution of their workplace, the chemical laboratory, has remained until now almost completely unexplored territory. Morris sets things right in this lively and well-documented history. The book is not only an intellectual but also a visual feast, packed as it is with an extraordinary number of striking illustrationsÃ¢â ¬â •many of them new even to the specialistÃ¢â ¬â„¢s eye.Ã¢â ¬Â• (Alan J. Rocke, author of Image and Reality: KekulÃƒÂ©, Kopp, and the Scientific Imagination)Ã¢â ¬Å“A revealing, illustrated tour of chemical laboratories, real

ones, filled with real men and women, working especially in the eighteenth and nineteenth centuries and beyond to today. A fascinating history, as well as a highly enjoyable read.Ã¢â ¬Â• (Sharon Bertsch McGrayne, author of Prometheans in the Lab and The Theory That Would Not Die)

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As a chemist it was surprising to see how laboratories evolved in the last 2 centuries.

It is a great book. I really think this is a very well written book. The story is very engaging. Definitely a wonderful book.

Calder and his Work Soft Condensed Matter (Oxford Master Series in Condensed Matter Physics, Vol. 6) Dulcinea in the Factory: Myths, Morals, Men, and Women in ColombiaÃ¢â ¬â„¢s Industrial Experiment, 1905Ã¢â ¬â œ1960 (Comparative and International Working-Class History)