

Napoleons Buttons How 17 Molecules Changed History Penny Le Couteur

Yeah, reviewing a ebook Napoleons Buttons How 17 Molecules Changed History Penny Le Couteur could go to your close links listings. This is just one of the solutions for you to be successful. As understood, attainment does not suggest that you have wonderful points.

Comprehending as well as contract even more than additional will present each success. next-door to, the proclamation as well as perspicacity of this Napoleons Buttons How 17 Molecules Changed History Penny Le Couteur can be taken as skillfully as picked to act.



Molecules and Medicine ECW Press

Molecules of Murder is about infamous murderers and famous victims; about people like Harold Shipman, Alexander Litvinenko, Adelaide Bartlett, and Georgi Markov. Few books on poisons analyse these crimes from the viewpoint of the poison itself, doing so throws a new light on how the murders or attempted murders were carried out and ultimately how the perpetrators were uncovered and brought to justice. Part I includes molecules which occur naturally and were originally used by doctors before becoming notorious as murder weapons. Part II deals with unnatural molecules, mainly man-made, and they too have been dangerously misused in famous crimes. The book ends with the most famous poisoning case in recent years, that of Alexander Litvinenko and his death from polonium chloride. The first half of each chapter starts by looking at the target molecule itself, its discovery, its history, its chemistry, its use in medicine, its toxicology, and its effects on the human body. The second half then investigates a famous murder case and reveals the modus operandi of the poisoner and how some were caught, some are still at large, and some literally got away with murder. Molecules of Murder will explain how forensic chemists have developed cunning ways to detect minute traces of dangerous substances, and explain why some of these poisons, which appear so life-threatening, are now being researched as possible life-savers. Award winning science writer John Emsley has assembled another group of true crime and chemistry stories to rival those of his highly acclaimed Elements of Murder.

Cathedrals of Science The Experiment

A sweeping history of tragic genius, cutting-edge science, and the Haber-Bosch discovery that changed billions of lives—including your own. At the dawn of the twentieth century, humanity was facing global disaster: Mass starvation was about to become a reality. A call went out to the world's scientists to find a solution. This is the story of the two men who found it: brilliant, self-important Fritz Haber and reclusive, alcoholic Carl Bosch. Together they discovered a way to make bread out of air, built city-sized factories, and saved millions of lives. But their epochal triumph came at a price we are still paying. The Haber-Bosch process was also used to make the gunpowder and explosives that killed millions during the two world wars. Both men were vilified during their lives; both, disillusioned and disgraced, died tragically. The Alchemy of Air is the extraordinary, previously untold story of a discovery that changed the way we grow food and the way we make war—and that promises to continue shaping our lives in fundamental and dramatic ways. The Poison Squad Crown

"What Sass does—and does well—is convey the richness of the material world and the ingenuity of humankind in making use of it." —Kirkus Reviews Periodic Tales Abrams

In The Demon Under the Microscope, Thomas Hager chronicles the dramatic history of sulfa, the first antibiotic and the drug that shaped modern medicine. The Nazis discovered it. The Allies won the war with it. It conquered diseases, changed laws, and single-handedly launched the era of antibiotics. Sulfa saved millions of lives—among them those of Winston Churchill and Franklin Delano Roosevelt Jr.—but its real effects are even more far reaching. Sulfa changed the way new drugs were developed, approved, and sold; transformed the way doctors treated patients; and ushered in the era of modern medicine. The very concept that chemicals created in a lab could cure disease revolutionized medicine, taking it from the treatment of symptoms and discomfort to the eradication of the root cause of illness. A strange and colorful story, The Demon Under the Microscope

illuminates the vivid characters, corporate strategy, individual idealism, careful planning, lucky breaks, cynicism, heroism, greed, hard work, and the central (though mistaken) idea that brought sulfa to the world. This is a fascinating scientific tale with all the excitement and intrigue of a great suspense novel. **Molecules of Murder** Black Dog & Leventhal

A unique approach to the history of science using do-it-yourself experiments along with brief historical profiles to demonstrate how the ancient alchemists stumbled upon the science of chemistry. Be the alchemist! Explore the legend of alchemy with the science of chemistry. Enjoy over twenty hands-on demonstrations of alchemical reactions. In this exploration of the ancient art of alchemy, three veteran chemists show that the alchemists' quest involved real science and they recount fascinating stories of the sages who performed these strange experiments. Why waste more words on this weird deviation in the evolution of chemistry? As the authors show, the writings of medieval alchemists may seem like the ravings of brain-addled fools, but there is more to the story than that. Recent scholarship has shown that some seemingly nonsensical mysticism is, in fact, decipherable code, and Western European alchemists functioned from a firmer theoretical foundation than previously thought. They had a guiding principle, based on experience: separate and purify materials by fire and reconstitute them into products, including, of course, gold and the universal elixir, the Philosophers' stone. Their efforts were not in vain: by trial, by error, by design, and by persistence, the alchemists discovered acids, alkalis, alcohols, salts, and exquisite, powerful, and vibrant reactions--which can be reproduced using common products, minerals, metals, and salts. So gather your vats and stoke your fires! Get ready to make burning waters, peacocks' tails, Philosophers' stone, and, of course, gold! **Taste** Penguin

"Foodies rejoice! Malcolm Gladwell's favorite food inventor offers a guide to the senses with advice on how to develop your palate and better enjoy the pleasures of eating. Featured by Malcolm Gladwell in a New Yorker magazine article about the quest to develop the perfect cookie, Barb Stuckey is the food developer that famed foodies--such as Michael Pollan--turn to when they need to understand the psychology and physiology of taste. In Taste What You're Missing, Stuckey shares her professional knowledge in an engaging style that's one part Mary Roach, two parts Oliver Sacks, and a dash of Anthony Bourdain for spice. Taste What You're Missing serves up stories: seared, sauced, and garnished with humor and insight into our complicated experiences with food. First explaining the building blocks of taste perception on a physical level, Stuckey walks readers through the five basic tastes: sweet, sour, bitter, salt, and umami. She explains the critical importance of smell and how the other senses--touch, hearing, and sight--come into play when we enthusiastically dive into a plate of food. She provides eye-opening and delicious anecdotes and exercises that readers can perform to learn, for example, their unique "taster type," or the subtle differences between sour, bitter, tannic, and astringent. Armed with this new knowledge, readers can improve their ability to discern flavors, detect ingredients, and devise new taste combinations in their own kitchens. Keeping in mind that the only thing foodies like better than eating food is talking about food, Taste What You're Missing gives such curious eaters, Food Network watchers, kitchen tinkerers, and armchair Top Chefs understanding and language that will impress their friends and families with insider knowledge about everything they eat"-- **Stuff Matters** Harlequin

An eye-opening journey into the power of human movement and how we can harness it to optimize our brain health, boost our mood and improve every aspect our lives For our earliest ancestors who hunted and gathered, movement meant survival. Our brains evolved to reward physical activity. Moving, thinking and feeling have always been inextricably linked. Yet what happens when we stop moving? Today, on average, we spend around 70% of our lives sitting or lying completely still. Our sedentary lifestyle—desk jobs, long commutes and lots of screen time—is not only bad for our bodies. It can also result in anxiety, depression and a lower overall IQ. But there's good news. Even the simplest movements can reactivate our bodies and open up a hotline to our minds, improving our overall well-being and longevity. And we don't have to spend countless hours in the gym. In fact, exercise as we understand it misses the point. Veteran science journalist Caroline Williams explores the cutting-edge research behind brain health and physical activity, interviewing scientists from around the world to completely reframe our relationship to movement. Along the way she reveals easy tricks that we could all use to improve our memory, maximize our creativity, strengthen our emotional literacy and more. A welcome counterpoint to the current mindfulness craze, Move offers a more stimulating and productive way of freeing our caged minds to live our best life.

The Alchemy of Air Voyageur Press

An around-the-world journey to discover where in the wild we can find the elements of life and the surprising ways they're essential to our survival We all know that we depend on elements for survival—from the oxygen in the air we breathe to the carbon in the molecular structures of all living things. But we don't often stop to appreciate how, say, phosphorous holds our DNA together or how potassium powers our optic nerves so that we can see. In The Elements We Live By, physicist and award-winning author Anja Røyne takes us on an astonishing journey through chemistry and physics, introducing the building blocks from which we humans—and the world—are made. Not only does Røyne explain why our bodies need iron, phosphorus, silicon, potassium, and many more elements in just the right amounts in order to function, she also leads us around the world to where these precious elements are found (some of them in ever-shrinking quantities). You'll understand how precariously balanced our lives—and ways of life—really are, and you'll see these unsung heroes of the periodic table in an entirely new light.

Molecules Royal Society of Chemistry

'Fascinating and enjoyable ... enthused with insight' - Brian Cox Uranium, carbon, iron, titanium, gold, silver and silicon - former BP CEO John Browne explains how seven elements are shaping the 21st century, for good and for bad. Humans have put the Earth's resources to extraordinary use, but not always for the benefit of humankind. SEVEN ELEMENTS vividly describes how iron, carbon, gold, silver, uranium, titanium and silicon have shaped the world around us - for good and for bad. This book takes you on an adventure of human passion, ingenuity and discovery, but it is a journey that is far from over: we continue to find surprising new uses for each of these seven key elements. Discover how titanium pervades modern consumer society, how natural gas is transforming the global energy sector and how an innovative new form of carbon could be starting a technological revolution. SEVEN ELEMENTS is a unique mix of science, history and politics, interwoven with

the author's extensive personal and professional experience.

The Drug Hunters Penguin

A world-leading materials scientist presents an engrossing collection of stories that explain the science and history of materials, from the plastic in our appliances to the elastic in our underpants, revealing the miracles of engineering that seep into our everyday lives. 25,000 first printing.

Ten Drugs W. W. Norton & Company

In Cathedrals of Science, Patrick Coffey describes how chemistry got its modern footing-how thirteen brilliant men and one woman struggled with the laws of the universe and with each other. They wanted to discover how the world worked, but they also wanted credit for making those discoveries, and their personalities often affected how that credit was assigned. Gilbert Lewis, for example, could be reclusive and resentful, and his enmity with Walther Nernst may have cost him the Nobel Prize; Irving Langmuir, gregarious and charming, "rediscovered" Lewis's theory of the chemical bond and received much of the credit for it. Langmuir's personality smoothed his path to the Nobel Prize over Lewis. Coffey deals with moral and societal issues as well. These same scientists were the first to be seen by their countries as military assets. Fritz Haber, dubbed the "father of chemical warfare," pioneered the use of poison gas in World War I-vividly described-and Glenn Seaborg and Harold Urey were leaders in World War II's Manhattan Project; Urey and Linus Pauling worked for nuclear disarmament after the war. Science was not always fair, and many were excluded. The Nazis pushed Jewish scientists like Haber from their posts in the 1930s. Anti-Semitism was also a force in American chemistry, and few women were allowed in; Pauling, for example, used his influence to cut off the funding and block the publications of his rival, Dorothy Wrinch. Cathedrals of Science paints a colorful portrait of the building of modern chemistry from the late 19th to the mid-20th century.

Seven Elements That Have Changed The World Houghton Mifflin Harcourt

Shortlisted for the 2020 AAAS/Subaru SB&F Prize for Excellence in Science Books Creating an element is no easy feat. It's the equivalent of firing six trillion bullets a second at a needle in a haystack, hoping the bullet and needle somehow fuse together, then catching it in less than a thousandth of a second - after which it's gone forever. Welcome to the world of the superheavy elements: a realm where scientists use giant machines and spend years trying to make a single atom of mysterious artefacts that have never existed on Earth. From the first elements past uranium and their role in the atomic bomb to the latest discoveries stretching our chemical world, Superheavy will reveal the hidden stories lurking at the edges of the periodic table. Why did the US Air Force fly planes into mushroom clouds? Who won the transfermium wars? How did an earthquake help give Japan its first element? And what happened when Superman almost spilled nuclear secrets? In a globe-trotting adventure that stretches from the United States to Russia, Sweden to Australia, Superheavy is your guide to the amazing science filling in the missing pieces of the periodic table. By the end you'll not only marvel at how nuclear science has changed our lives - you'll wonder where it's going to take us in the future.

Reactions Wiley-VCH

Napoleon's Buttons is the fascinating account of seventeen groups of molecules that have greatly influenced the course of history. These molecules provided the impetus for early exploration, and made possible the voyages of discovery that ensued. The molecules resulted in grand feats of engineering and spurred advances in medicine and law; they determined what we now eat, drink, and wear. A change as small as the position of an atom can lead to enormous alterations in the properties of a substance-which, in turn, can result in great historical shifts. With lively prose and an eye for colorful and unusual

details, Le Couteur and Burreson offer a novel way to understand the shaping of civilization and the workings of our contemporary world.

The Demon Under the Microscope Weidenfeld & Nicolson

Pulitzer Prize-winning biologist Edward O. Wilson imparts the wisdom of his storied career to the next generation. Edward O. Wilson has distilled sixty years of teaching into a book for students, young and old. Reflecting on his coming-of-age in the South as a Boy Scout and a lover of ants and butterflies, Wilson threads these twenty-one letters, each richly illustrated, with autobiographical anecdotes that illuminate his career-both his successes and his failures-and his motivations for becoming a biologist. At a time in human history when our survival is more than ever linked to our understanding of science, Wilson insists that success in the sciences does not depend on mathematical skill, but rather a passion for finding a problem and solving it. From the collapse of stars to the exploration of rain forests and the oceans' depths, Wilson instills a love of the innate creativity of science and a respect for the human being's modest place in the planet's ecosystem in his readers.

Historical Sketch of the Mining Law in California Little, Brown

When you're cooking, you're a chemist! Every time you follow or modify a recipe, you are experimenting with acids and bases, emulsions and suspensions, gels and foams. In your kitchen you denature proteins, crystallize compounds, react enzymes with substrates, and nurture desired microbial life while suppressing harmful bacteria and fungi. And unlike in a laboratory, you can eat your experiments to verify your hypotheses. In Culinary Reactions, author Simon Quellen Field turns measuring cups, stovetop burners, and mixing bowls into graduated cylinders, Bunsen burners, and beakers. How does altering the ratio of flour, sugar, yeast, salt, butter, and water affect how high bread rises? Why is whipped cream made with nitrous oxide rather than the more common carbon dioxide? And why does Hollandaise sauce call for &"clarified&" butter? This easy-to-follow primer even includes recipes to demonstrate the concepts being discussed, including: &• Whipped Creamsicle Topping-a foam &• Cherry Dream Cheese-a protein gel &• Lemonade with Chameleon Eggs-an acid indicator

Superheavy Penguin

Finalist for the 2018 National Book Award for Nonfiction A New York Times Editors' Choice Selection The untold story of Hamilton's-and Burr's-personal physician, whose dream to build America's first botanical garden inspired the young Republic. On a clear morning in July 1804, Alexander Hamilton stepped onto a boat at the edge of the Hudson River. He was bound for a New Jersey dueling ground to settle his bitter dispute with Aaron Burr. Hamilton took just two men with him: his "second" for the duel, and Dr. David Hosack. As historian Victoria Johnson reveals in her groundbreaking biography, Hosack was one of the few points the duelists did agree on. Summoned that morning because of his role as the beloved Hamilton family doctor, he was also a close friend of Burr. A brilliant surgeon and a world-class botanist, Hosack-who until now has been lost in the fog of history-was a pioneering thinker who shaped a young nation. Born in New York City, he was educated in Europe and returned to America inspired by his newfound knowledge. He assembled a plant collection so spectacular and diverse that it amazes botanists today, conducted some of the first pharmaceutical research in the United States, and introduced new surgeries to American. His tireless work championing public health and science earned him national fame and praise from the likes of Thomas Jefferson, James Madison,

Alexander von Humboldt, and the Marquis de Lafayette. One goal drove Hosack above all others: to build the Republic's first botanical garden. Despite innumerable obstacles and near-constant resistance, Hosack triumphed when, by 1810, his Elgin Botanic Garden at last crowned twenty acres of Manhattan farmland. "Where others saw real estate and power, Hosack saw the landscape as a pharmacopoeia able to bring medicine into the modern age" (Eric W. Sanderson, author of Mannahatta). Today what remains of America's first botanical garden lies in the heart of midtown, buried beneath Rockefeller Center. Whether collecting specimens along the banks of the Hudson River, lecturing before a class of rapt medical students, or breaking the fever of a young Philip Hamilton, David Hosack was an American visionary who has been too long forgotten. Alongside other towering figures of the post-Revolutionary generation, he took the reins of a nation. In unearthing the dramatic story of his life, Johnson offers a lush depiction of the man who gave a new voice to the powers and perils of nature.

TheLife of Christopher Columbus Illustrated World Scientific

The bestselling popular science author reveals "the connections between what we teach in chemistry courses and the world in which . . . [we] live" (ChemEd X). Interesting anecdotes and engaging tales make science fun, meaningful, and accessible. Separating sense from nonsense and fact from fiction, these essays cover everything from the ups of helium to the downs of drain cleaners, and provide answers to numerous mysteries, such as why bug juice is used to color ice cream and how spies used secret inks. Mercury in teeth, arsenic in water, lead in the environment, and aspartame in food are also discussed. Mythbusters include the fact that Edison did not invent the light bulb and that walking on hot coals does not require paranormal powers. The secret life of bagels is revealed, and airbags, beer, and soap yield their mysteries. These and many more surprising, educational, and entertaining commentaries show the relevance of science to everyday life. "A delightful and informative read. Dr. Schwarcz tells it like it is, whether the subject is light at heart or as weighty as death." -The Cosmic Chemist "Fascinating [this book] is, thanks to the author's lively style and contagious enthusiasm for chemistry, and his ability to make it accessible . . . connects the dots between such unlikely events as the madness of King George III and the royal fondness for sauerkraut; and between gluten, the molecular make-up of trans-fatty acids, and how the cookie crumbles." -Montreal Review of Books

Letters to a Young Scientist Penguin UK

The refrigerator. This white box that sits in the kitchen may seem mundane nowadays, but it is one of the wonders of 20th century science - life-saver, food-preserved and social liberator, while the science of refrigeration is crucial, not just in transporting food around the globe but in a host of branches on the scientific tree. Refrigerators, refrigeration and its discovery and applications provides the remarkable and eye-opening backdrop to Chilled, the story of how science managed to rewrite the rules of food, and how the technology whirring behind every refrigerator is at play, unseen, in a surprisingly broad sweep of modern life. Part historical narrative, part scientific mystery-lifter, Chilled looks at the ice-pits of Persia (Iranians still call their fridge the 'ice-pit'), reports on a tug of war between 16 horses and the atmosphere, bears witness to ice harvests on the Regents Canal, and shows how bleeding sailors demonstrated to ship's doctors that heat is indestructible, featuring a cast of characters such as the Ice King of Boston, Galileo, Francis Bacon, and the ostracised son of a notorious 18th-century French traitor. As people learned more about what cold actually was, scientists invented machines for making it, with these first used in earnest to chill Australian lager. The principles behind those white boxes in the kitchen remain the same today, but refrigeration is not all about food - for example, a refrigerator is needed to make soap, penicillin or orange squash; without it, IVF would be impossible. Refrigeration technology has

also been crucial in some of the most important scientific breakthroughs of the last 100 years, from the discovery of superconductors to the search for the Higgs boson. And the fridge will still be pulling the strings behind the scenes as teleporters and intelligent computer brains turn our science-fiction vision of the future into fact.

American Eden: David Hosack, Botany, and Medicine in the Garden of the Early Republic Simon and Schuster

Molecules and Medicine provides, for the first time ever, a completely integrated look at chemistry, biology, drug discovery, and medicine. It delves into the discovery, application, and mode of action of more than one hundred of the most significant molecules in use in modern medicine. Opening sections of the book provide a unique, clear, and concise introduction, which enables readers to understand chemical formulas.

A Grain of Sand Chicago Review Press

A New York Times Notable Book The inspiration for PBS's AMERICAN EXPERIENCE film The Poison Squad. From Pulitzer Prize winner and New York Times-bestselling author Deborah Blum, the dramatic true story of how food was made safe in the United States and the heroes, led by the inimitable Dr. Harvey Washington Wiley, who fought for change By the end of nineteenth century, food was dangerous. Lethal, even. "Milk" might contain formaldehyde, most often used to embalm corpses. Decaying meat was preserved with both salicylic acid, a pharmaceutical chemical, and borax, a compound first identified as a cleaning product. This was not by accident; food manufacturers had rushed to embrace the rise of industrial chemistry, and were knowingly selling harmful products. Unchecked by government regulation, basic safety, or even labelling requirements, they put profit before the health of their customers. By some estimates, in New York City alone, thousands of children were killed by "embalmed milk" every year. Citizens--activists, journalists, scientists, and women's groups--began agitating for change. But even as protective measures were enacted in Europe, American corporations blocked even modest regulations. Then, in 1883, Dr. Harvey Washington Wiley, a chemistry professor from Purdue University, was named chief chemist of the agriculture department, and the agency began methodically investigating food and drink fraud, even conducting shocking human tests on groups of young men who came to be known as, "The Poison Squad." Over the next thirty years, a titanic struggle took place, with the courageous and fascinating Dr. Wiley campaigning indefatigably for food safety and consumer protection. Together with a gallant cast, including the muckraking reporter Upton Sinclair, whose fiction revealed the horrific truth about the Chicago stockyards; Fannie Farmer, then the most famous cookbook author in the country; and Henry J. Heinz, one of the few food producers who actively advocated for pure food, Dr. Wiley changed history. When the landmark 1906 Food and Drug Act was finally passed, it was known across the land, as "Dr. Wiley's Law." Blum brings to life this timeless and hugely satisfying "David and Goliath" tale with righteous verve and style, driving home the moral imperative of confronting corporate greed and government corruption with a bracing clarity, which speaks resoundingly to the enormous social and political challenges we face today.