

BOOK LIST

This list contains a selection of books that are suitable for reading around by A level Chemistry students and their teachers. I've tried to group them by topic. It does not pretend to be an exhaustive list, but it does give a wide choice. It includes most of the output by popular writers like John Emsley and Joe Schwarcz.

“Interesting Molecules”

- P. W. Atkins, *Molecules*, W.H. Freeman, 1987; second edition is:- P. W. Atkins, *Atkins' Molecules*, CUP, 2003. [2003 is OOP. Lots of second hand 1987 edition around]
- R. Hofmann, *The Same and Not the Same*, Columbia University Press, 1995.
- J. Emsley, *Molecules at an Exhibition*, Oxford, 1998.
- R. L. Myers, *The 100 Most Important Chemical Compounds: A Reference Guide*, Greenwood Press, 2007.
- B. Selinger, *Chemistry in the Market Place*, Harcourt Brace, 5th edition, 1998.
- P. Le Couteur and J. Burrenson, *Napoleon's Buttons: How 17 Molecules Changed History*, Tarcher, 2003.
- Brigitte Proust, *Petite géométrie des parfums*, Paris, Seuil, 2006. (• if you speak French)
- R. J. Giguere (ed), *Molecules That Matter*, Chemical Heritage Foundation, 2008.
- S. A. Cotton, *Every Molecule Tells A Story*, CRC Press, 2012.
- M. Miodownik, *Stuff Matters: Exploring the Marvelous Materials That Shape Our Man-Made World*, Houghton Mifflin Harcourt, 2014.
- T. Gray, *Molecules: The Elements and the Architecture of Everything*, Black Dog, 2014.
- P. May and S. A. Cotton, *Molecules That Amaze Us*, CRC Press, 2014.
- A. Brunning, *Why Does Asparagus Make Your Wee Smell?: And 57 other curious food and drink questions*, Orion, 2015.
- D. Lowe, *The Chemistry Book: From Gunpowder to Graphene, 250 Milestones in the History of Chemistry*, Sterling, 2016.
- J. Barnett, *Carbon: One Atom's Odyssey*, No Starch Press, 2021.

Popular Chemistry

- J. Emsley, *The Consumer's Good Chemical Guide*, W. H. Freeman, 1994.
- J. Emsley, *The Shocking History of Phosphorus*, Macmillan, 2000.
- J. Emsley, *Vanity, Vitality and Virility, The Science Behind the Products You Love to Buy*, OUP, 2004.
- J. Emsley, *The Elements of Murder; the History of Poisons*, OUP, 2005.
- J. Emsley, *Better Looking, Better Living, Better Loving: How Chemistry Can Help You Achieve Life's Goals*, Wiley-VCH, 2007.
- J. Emsley, *Molecules of Murder: Criminal Molecules and Classic Murders*, RSC, 2008.
- J. Emsley, *Healthy, Wealthy, Sustainable World*, RSC, 2010.
- J. Emsley, *Chemistry at Home: Exploring the Ingredients in Everyday Products*, RSC, 2015
- J. Emsley, *More Molecules of Murder*, RSC, 2017.
- J. Schwarcz, *The Genie in the Bottle*, W. H. Freeman, 2001.
- J. Schwarcz, *Radar, Hula Hoops, and Playful Pigs*, Owl Books, 2001.
- J. Schwarcz, *That's the Way the Cookie Crumbles: 62 All-New Commentaries on the Fascinating Chemistry of Everyday Life*, ECW Press, 2004.
- J. Schwarcz, *The Fly in the Ointment: 70 Fascinating Commentaries on the Science of Everyday Life*, ECW Press, 2004.
- J. Schwarcz, *Dr. Joe and What You Didn't Know: 177 Fascinating Questions & Answers about the Chemistry of Everyday Life*, ECW Press, 2004.
- J. Schwarcz, *Let Them Eat Flax: 70 All-New Commentaries on the Science of Everyday Food & Life*, ECW Press, 2005.
- J. Schwarcz, *Science, Sense and Nonsense: 61 Nourishing, Healthy, Bunk-Free Commentaries on the Chemistry That Affects Us All*, Doubleday Canada, 2009.

- J. Schwarcz, *Dr. Joe's Brain Sparks: 179 Inspiring and Enlightening Inquiries into the Science of Everyday Life*, Doubleday Canada, 2010.
- J. Schwarcz, *Brain Fuel: 199 Mind-Expanding Inquiries Into the Science of Everyday Life*, Anchor Canada, 2010.
- J. Schwarcz, *The Right Chemistry*, Random House, Canada, 2012.
- J. Schwarcz, *Is that a Fact?: Frauds, Quacks, and the Real Science of Everyday Life*, ECW Press, 2014.
- J. Schwarcz, *Monkeys, Myths and Molecules: Separating Fact from Fiction in the Science of Everyday Life*, ECW Press, 2015.
- B. Selinger, *Why the Watermelon Won't Ripen in Your Armpit: And Other Science Conundrums*, Allen & Unwin, 2000.
- L. Fisher, *How to Dunk a Doughnut: Using Science in Everyday Life: The Science of Everyday Life*, Phoenix, 2003.
- K. K. Karukstis and G. R. Van Hecke, *Chemistry Connections: The Chemical Basis of Everyday Phenomena*, Academic Press, 2003.
- S. Q. Field, *Why There's Antifreeze in Your Toothpaste: The Chemistry of Household Ingredients*, Chicago Review Press, 2007.
- S. Kean, *The Disappearing Spoon: And Other True Tales of Madness, Love, and the History of the World from the Periodic Table of the Elements*, Little Brown, 2010.
- L. Öhrström, *The Last Alchemist in Paris*, OUP, 2014

Chemistry of Food

- H. McGee, *On Food and Cooking*, Harper Collins 1986; second (enlarged) edition published 2004.
- P. Barham, *The Science of Cooking*, Springer, 2000.
- T. Lister and H. Blumenthal, *Kitchen Chemistry*, RSC, 2005.
- H. This, *Molecular Gastronomy: Exploring the Science of Flavor*, Columbia University Press, 2006.
- H. This, *Kitchen Mysteries: Revealing the Science of Food*, Columbia University Press, 2007.
- H. This, *Building a Meal: From Molecular Gastronomy to Culinary Constructivism*, Columbia University Press, 2009.
- H. This, *Why Do Lobsters Turn Red When You Cook Them?* Fall River Press, 2009.
- J. Schwarcz, *An Apple a Day: The Myths, Misconceptions, and Truths about the Foods We Eat*, Other Press [sic], 2009.
- H. This, *Kitchen Mysteries: Revealing the Science of Cooking*, Columbia University Press, 2010.
- H. This, *Science of the Oven*, Columbia University Press, 2012.
- S. Q. Field, *Culinary Reactions: The Everyday Chemistry of Cooking*, Chicago Review Press, 2011.
- T. Coultate, *Food: The Chemistry of its Components*, RSC, 2015 (6th ed., previous editions from 1984)
- H. This, *Note-By-Note Cooking: The Future of Food*, Columbia University Press, 2014.
- L. Rowe, *Taste: The Infographic Book of Food*, Aurum Press, 2015.
- G. L. Wenk, *Your Brain on Food: How Chemicals Control Your Thoughts and Feelings*, OUP, 1st edition 2010, 2nd edition 2015.
- D. Eschlman and S. Ettlinger, *What's in My Food?: 75 Additives & 25 Grocery Staples Visually Explored*, Regan Arts 2015 (food additives and popular foods that contain them, both pictures and chemical structures).
- M. Hartings, *Chemistry in Your Kitchen*, RSC, 2017.

Chillis and spices in general.

Chemical aspects

- G. Charalambous (ed), *Spices, herbs and edible fungi*. Amsterdam: Elsevier, 1994.

V. A. Parthasarathy, B. Chempakam and T. J. Zachariah (eds), *Chemistry of Spices*, Wallingford: CABI Publishing, 2008.

Curries and British curry-houses

- S. Basu, *Curry: The Story of the Nation's Favourite Dish*, Stroud, Sutton, 2003.
J. Monroe, *Star of India : The Spicy Adventures of Curry*, Chichester, John Wiley, 2004.
L. Collingham, *Curry: a biography of a dish*. London: Chatto and Windus, 2005.
Colleen Taylor Sen, *Curry: A Global History*, Reaktion Books, 2009.

Spice history and the Spice Route

- C. Corn, *The Scents of Eden: A History of the Spice Trade*, New York, Kodansha America, 1998.
G. Milton, *Nathaniel's Nutmeg: Or, the True and Incredible Adventures of the Spice Trader Who Changed the Course of History*, Farrar Straus Giroux, 1999.
A. Dalby, *Dangerous tastes: the story of spices*, London: British Museum, 2000.
Carolyn Caldicott and Chris Caldicott, *The Spice Routes: More Recipes from the World Food Café*, London, Frances Lincoln, 2001.
J. Turner, *Spice: the history of a temptation*. London: Harper Collins, 2004.
J. Keay, *The spice route: a history*. London: John Murray, 2005.
G. P. Nabhan, *Cumin, Camels, and Caravans: A Spice Odyssey*, Berkeley, University of California Press, 2014.
J. O'Connell, *The Book of Spice: From Anise to Zedoary*, Profile Books, 2015

Other stuff on spices

- A. Naj, *Peppers: A Story of Hot Pursuits*, Knopf, 1991.
P. Willard, *Secrets of Saffron: The Vagabond Life of The World's Most Seductive Spice*, Boston, The Beacon Press, 2001.
F. Czarra, *Spices: A Global History*, Reaktion Books, 2009.
K. M. Friese, K. Kraft and G. P. Nabhan, *Chasing Chiles: Hot Spots Along the Pepper Trail, Vermont*, Chelsea Green, 2011.
M. Shaffer, *Pepper: A History of the World's Most Influential Spice*, New York, St Martin's Press, 2013.

Periodic Table

- P. W. Atkins, *The Periodic Kingdom*, Weidenfeld and Nicholson, 1995.
Primo Levi, *The Periodic Table*, Everyman's Library, 1995 (other editions available).
P. Strathern, *Mendeleev's Kingdom*, Hamish Hamilton, 2000.
J. Emsley, *Nature's Building Blocks*, Oxford, 2001.
P. Ball, *The Ingredients: A Guided Tour of the Elements*, OUP, 2002
P. Ball, *The Elements: A Very Short Introduction*, OUP, 2004.
E. Scerri, *The Periodic Table: Its Story and Its Significance*, OUP, 2006.
T. Gray, *The Elements: A Visual Exploration of Every Known Atom in the Universe*, Black Dog, 2009.
H. Aldersey-Williams, *Periodic Tales: The Curious Lives of the Elements*, Viking, 2011.
J. Challoner, *The Elements: The New Guide to the Building Blocks of Our Universe*, Carlton Books, 2012.
J. Browne, *Seven Elements That Have Changed The World*, Weidenfeld and Nicholson, 2013. (Fe, C, Au, Ag, U, Ti, Si)
E. Scerri, *A Tale of Seven Elements*, OUP, 2013 (Pa, Hf, Re, Tc, Fr, At, Pm).
E. Scerri (ed), *30-Second Elements: The 50 Most Significant Elements, Each Explained in Half a Minute*, Icon Books, 2013.
P. Parsons and G. Dixon, *The Elements*, Quercus, 2013.
D. Scott, *Around the World in 18 Elements*, RSC, 2014.
M. Fontani, M. Costa and M. V. Orna, *The Lost Elements: The Periodic Table's Shadow Side*, Oxford, 2014.

Series of 12 books on blocks of elements published by Heinemann, written by Nigel Saunders, e.g. *Oxygen and Group 6 Elements, Sodium and The Alkali Metals, etc.*

Rare Metals and Their Supply

K. Veronese, *Rare: The High-Stakes Race to Satisfy Our Need for the Scarcest Metals on Earth*, Prometheus Books, 2015.

D. S. Abraham, *The Elements of Power: Gadgets, Guns, and the Struggle for a Sustainable Future in the Rare Metal Age*, Yale University Press, 2016.

The Atmosphere, water etc.

Philip Ball, *H₂O: A Biography of Water*, Phoenix, 2000.

N. Lane, *Oxygen: The molecule that made the world*, OUP, 2002.

B. Fagan, *The Long Summer: How Climate Changed Civilization*, Basic Books, 2003.

J. Jackson, *A World on Fire: A Heretic, an Aristocrat, and the Race to Discover Oxygen*, Penguin, 2007.

M. Gosnell, *Ice: The Nature, the History and the Uses of an Astonishing Substance*, University of Chicago Press, 2007.

G. Walker, *An Ocean of Air: A Natural History of the Atmosphere*, Bloomsbury, 2008.

S. Kean, *Caesar's Last Breath. The Epic Story of the Air Around Us*, Doubleday, 2017.

S. Solomon, *Water: The Epic Struggle for Wealth, Power, and Civilization*, Harper, 2010.

B. Fagan, *Elixir: A Human History of Water*, Bloomsbury, 2011.

J. Salzman, *Drinking Water: A History*, Duckworth, 2013.

D. E. Canfield, *Oxygen: A Four Billion Year History*, Princeton University Press, 2014.

R. Mears, *The Real Heroes of Telemark: The True Story of the Secret Mission to Stop Hitler's Atomic Bomb*, Hodder, 1996. (Heavy water)

P. F. Dahl, *Heavy Water and the Wartime Race for Nuclear Energy*, CRC Press, 1999.

Nitrogen, Ammonia and Fertilisers

G. J. Leigh, *The World's Greatest Fix: A History of Nitrogen and Agriculture*, OUP, 2004.

V. Smil, *Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food Production*, The MIT Press, 2004

D. Charles, *Between Genius and Genocide: The Tragedy of Fritz Haber, Father of Chemical Warfare*, Jonathan Cape, 2005.

D. Stolzenberg, *Fritz Haber: Chemist, Nobel Laureate, German, Jew: A Biography*, Chemical Heritage Foundation, 2005.

T. Hager, *The Alchemy of Air: A Jewish Genius, a Doomed Tycoon, and the Scientific Discovery That Fed the World but Fueled the Rise of Hitler*, Broadway Books, 2009

Pheromones and chemistry in living things (also “drugs from rain forests” and plants using chemistry)

W. C. Agosta, *Chemical Communication*, Scientific American Library, 1992.

W. C. Agosta, *Thieves, Deceivers, and Killers*, Princeton University Press, 2001.

W. C. Agosta, *Bombardier Beetles and Fever Trees*, Perseus Press, 1995.

C. Joyce, *Earthly Goods*, Little Brown, 1994.

M. J. Plotkin, *Medicine Quest*, Viking, 2000.

T. D. Wyatt, *Pheromones and Animal Behaviour: Communication by Smell and Taste*, Cambridge University Press, 2003. (2nd edition 2014)

T. Eisner, M. Eisner and M. Siegler, *Secret Weapons: Defenses of Insects, Spiders, Scorpions, and Other Many-Legged Creatures*, Belknap Press, 2007.

R. Firn, *Nature's Chemicals*, OUP, 2009.

E. Ochiai, *Chemicals for Life and Living*, Springer, 2011.

Plants and chemistry (linking with previous section)

- G. Marks and W. Beatty, *The Medical Garden: Seven Important Drugs That Grow in the Wild*, Scribners, 1971
- J. Sumner, *The Natural History of Medicinal Plants*, Timber Press, 2000.
- H. Hobhouse, *Seeds of Change; Five plants that transformed mankind*, Sidgwick and Jackson 1985 (later edition of 2007 has *Six plants that transformed mankind* – sugar, tea, cotton, potatoes, quinine and coca)
- H. Hobhouse, *Seeds of Wealth; Four plants that made men rich*, Macmillan, 2003 (rubber, timber, tobacco and the wine grape).
- J. R. Hanson, *Chemistry in the Garden*, RSC, 2007
- W. Laws, *Fifty Plants That Changed the Course of History*, David & Charles, 2010.
- A. Stewart, *Wicked Plants: The A-Z of Plants That Kill, Maim, Intoxicate and Otherwise Offend*, Timber Press, 2010.
- M. Séquin, *The Chemistry of Plants: Perfumes, Pigments, and Poisons*, RSC, 2012.
- M. Séquin, *The Chemistry of Plants and Insects : Plants, Bugs, and Molecules*, RSC, 2017.

Medicinal Chemistry and medicinal molecules

- G. L. Patrick, *An Introduction to Medicinal Chemistry*, 2nd edition, Oxford, 2001 (other editions too).
- M. Wainwright, *Miracle Cure: Story of Antibiotics*, Wiley-Blackwell, 1990.
- S. Levy, *The Antibiotic Paradox: How the Misuse of Antibiotics Destroys Their Curative Powers*, Da Capo Press, 2002 (antibiotic resistance; other editions available)
- M. Honigsbaum, *The Fever Trail: In Search of the Cure for Malaria*, Farrar Straus Giroux, 2002
- J. Mann, *Life Saving Drugs: The Elusive Magic Bullet*, RSC, 2004.
- D. Jeffreys, *Aspirin: The Extraordinary Story of a Wonder Drug*, Bloomsbury, 2004
- J. Abramson, *Overdosed America, The Broken Promise of American Medicine*, Harper Collins 2004.
- J. J. Li, *Laughing Gas, Viagra, and Lipitor: The Human Stories Behind the Drugs We Use*, OUP, 2006.
- J. E. Lesch, *The First Miracle Drugs: How the Sulfa Drugs Transformed Medicine*, OUP, 2006.
- T. Hager, *The Demon Under the Microscope: From Battlefield Hospitals to Nazi Labs, One Doctor's Heroic Search for the World's First Miracle Drug*, Broadway Books, 2007 (sulfa drugs)
- P. Sheldon, *Fall and Rise of Aspirin: The Wonder Drug*, Brewin Books, 2007.
- E. J. Corey, L. Kürti and B. Czakó, *Molecules and Medicine*, John Wiley, 2007.
- K. C. Nicolaou and T. Montagnon, *Molecules That Changed the World: A Brief History of the Art and Science of Synthesis and its Impact*, Wiley VCH, 2008.
- R. Bud, *Penicillin: Triumph and Tragedy*, OUP, 2009.
- I. W. Sherman, *Magic Bullets To Conquer Malaria: from Quinine to Qinghaosu*, ASM Press, 2010.
- M. C. Gerald, *The Drug Book: From Arsenic to Xanax, 250 Milestones in the History of Drugs*, Sterling, 2013.
- J. J. Li, *Blockbuster Drugs: The Rise and Fall of the Pharmaceutical Industry*, OUP, 2014.
- J. J. Li, *Top Drugs: History, Pharmacology, Syntheses*, OUP, 2015.
- L. Bowater, *The Microbes Fight Back. Antibiotic Resistance*, RSC, 2017.
- D. R. Kirsch, *The Drug Hunters: The Improbable Quest to Discover New Medicines*, Arcade, 2017.

Chemistry in the body.

- A. Scott, *Vital Principles: Molecular Mechanisms of Life*, Wiley-Blackwell, 1988.
- D. Goodsell, *Our Molecular Nature: The Body's Motors, Machines and Messages*, Springer, 1996.
- S. Greenfield and P. Whitfield, *How We Work*, Marshall Editions, 1997.

- C. A. Pasternak, *The Molecules Within Us: Our Body In Health And Disease*, Perseus Books, 1998.
- J. Dawson, *Who Cut the Cheese?: A Cultural History of the Fart*, Ten Speed Printing, 1998.
- R. A. Lewin, *Merde: Excursions in Scientific, Cultural, and Socio-Historical Coprology*, Random House, 1999.
- E. P. Widmaier, *The Stuff of Life: Profiles of Molecules That Make Us Tick*, St Martin's Press, 2003.
- D. Goodsell, *The Machinery of Life*, Copernicus, 2nd edition, 2009.
- Sarah Everts, *The Joy Of Sweat. the Strange Science of Perspiration*, WW Norton, 2021.

Why Reactions Happen

- J. Keeler and P. Wothers, *Why Chemical Reactions Happen*, Oxford, 2003
- W. E. Dasent, *Nonexistent Compounds*, Marcel Dekker, 1965.

Drugs and chemistry

- D. M. Perrine, *The Chemistry of Mind-Altering Drugs*, American Chemical Society, 1996 (the best).
- J. S. Meyer and L. F. Quenzer, *Psychopharmacology: Drugs, The Brain, and Behavior*, Sinauer Associates, 2004.
- S. H. Barondes, *Molecules and Mental Illness*, Scientific American Library, 1993.
- S. H. Snyder, *Drugs and the Brain*, Scientific American Library, 1986.
- R. Siegel, *Intoxication*, E. P. Dutton, 1989.
- J. Stone and G. Darlington, *Pills, Potions, Poisons*, Oxford, 2000.
- J. Mann, *Murder, Magic and Medicine*, Oxford, 1992;
- J. Mann, *The Elusive Magic Bullet*, OUP, 1999; second edition is *Life Saving Drugs: the Elusive Magic Bullet*, RSC, 2004.
- J. Mann, *Turn On and Tune In. Psychedelics, Narcotics and Euphorants*, RSC, 2009.
- R. Davenport-Hines, *The Pursuit of Oblivion*, Weidenfield and Nicholson, 2001.
- R. Rudgley, *The Encyclopedia of Psychoactive Substances*, Little Brown, 1998.
- R. Rudgley, *The Alchemy of Culture, Intoxicants in Society*, British Museum Press, 1991.
- L. L. Iversen, *Drugs: A Very Short Introduction*, Oxford, 2001.
- L. L. Iversen, *The Science of Marijuana*, Oxford, 2000.
- L. L. Iversen, *Speed, Ecstasy, Ritalin: The Science of Amphetamines*, Oxford, 2006.
- J. Holland (ed), *Ecstasy: The Complete Guide*, Park Street Press, 2001.
- D. Streatfield, *Cocaine*, Virgin, 2001.
- M. Bowden, *Killing Pablo: the Hunt for the Richest, Most Powerful Criminal in History*, Atlantic Books, 2001.
- P. Homan, B. Hudson and R. C. Rowe, *Popular Medicines: An Illustrated History*, Pharmaceutical Press, 2007.
- M. Jay, *High Society: The Central Role of Mind-Altering Drugs in History, Science, and Culture*, Park Street Press, 2010.
- D. Nutt, *Drugs - Without the Hot Air: Minimising the Harms of Legal and Illegal Drugs*, UIT Cambridge, 2012.
- B. Sahakian and J. N. LaBuzetta, *Bad Moves: How decision making goes wrong, and the ethics of smart drugs*, OUP, 2013.
- R. J. Miller, *Drugged: The Science and Culture Behind Psychotropic Drugs*, OUP, 2014.
- R. Saviano, *Zero Zero Zero*, Allen Lane, 2015 (the world cocaine trade)
- S. Quinones, *Dreamland: The True Tale of America's Opiate Epidemic*, Bloomsbury, 2015 (opiate addiction, synthetic and natural)
- N. Ohler, *Blitzed: Drugs in Nazi Germany*, Allen Lane, 2016 (Amphetamines and other drugs; an English translation of *Der totale Rausch: Drogen im Dritten Reich* (2015))
- L. Kamienski, *Shooting Up: A History of Drugs in Warfare*, C. Hurst & Co, 2016.
- M. Jay, *Mescaline: A Global History of the First Psychedelic*, Yale University Press, 2019.
- H. Shapiro, *Waiting for the Man*, Helterkelter Publishing, 1999. (drugs and pop music)
- H. Shapiro, *Shooting Stars: Drugs, Hollywood and the Movies*, Serpent's Tail, 2003.

S. Napier-Bell, *Black Vinyl, White Powder*, Ebury Press, 2001. (drugs and pop music)

Nicotine, Tobacco and Smoking

- King James I, *A Counterblaste to Tobacco*, 1604, various editions, e.g. The Rodale Press, 1954.
- H. Lewine and A. Peckolick, *Goodbye to All That*, McGraw-Hill, 1970 (cigarettes in America)
- J. Goodman, *Tobacco in History*, Routledge, 1993.
- T. Parker-Pope, *Cigarettes. Anatomy of an Industry*, The New Press, 2001.
- K. Stratton, P. Shetty, R. Wallace and S. Bondurant (eds.), *Clearing The Smoke. Assessing the Harm Base for Tobacco Harm Reduction*, National Academy Press, 2001.
- I. Gately, *La Diva Nicotina. The Story of How Tobacco seduced the World*, Simon and Schuster, 2001.
- S. Gilman and Zhou Xun (eds.), *Smoke. A Global History of Smoking*, Reaktion Books, 2004.
- A.M. Brandt, *The Cigarette Century*, Perseus Books, 2007 (Big Tobacco in the USA)
- K. Wailoo, *Pushing Cool: Big Tobacco, Racial Marketing, and the Untold Story of the Menthol Cigarette*, University of Chicago Press, 2021.
- L. Etter, *The Devil's Playbook: Big Tobacco, Juul, and the Addiction of a New Generation*, Random House, 2021 (the downside of e-cigarettes)

Drugs and Sport

- S. Ungerleider, *Faust's Gold: Inside the East German Doping Machine*, Thomas Dunne Books, 2001. Updated edition 2013.
- D. Walsh, *From Lance to Landis: Inside the American Doping Controversy at the Tour de France*, Ballantine Books, 2007.
- M. Fainaru-Wada and L. Williams, *Game of Shadows: Barry Bonds, Balco, and the Steroids Scandal That Rocked Professional Sports*, Gotham Books, 2007.
- D. M. Rosen, *Dope: A History of Performance Enhancement in Sports from the Nineteenth Century to Today*, Praeger, 2008.
- M-T. Dinh-Audouin et al., *Le Chimie et le sport*, EDP Sciences, 2011.
- C. Cooper, *Run, Swim, Throw, Cheat: The science behind drugs in sport*, OUP, 2012
- R. Moore, *The Dirtiest Race in History: Ben Johnson, Carl Lewis and the 1988 Olympic 100m Final*, Wisden, 2012.
- D. Walsh, *Seven Deadly Sins: My Pursuit of Lance Armstrong*, Simon & Schuster, 2012.
- R. Albergotti and V. O'Connell, *Wheelmen: Lance Armstrong, the Tour de France, and the Greatest Sports Conspiracy Ever*, Headline, 2013
- J. Macur, *Cycle of Lies: The Fall of Lance Armstrong*, Collins, 2014.
- E. O'Reilly, *The Race to Truth: Blowing the whistle on Lance Armstrong and cycling's doping culture*, Bantam, 2014.
- M. Johnson, *Spitting in the Soup: Inside the Dirty Game of Doping in Sports*, VeloPress, 2016.

Testosterone.

- J. M. Dabbs, *Heroes, Rogues and Lovers. Testosterone and Behaviour*, McGraw-Hill 2000.
- J. Hobermann, *Testosterone Dreams, Rejuvenation, Aphrodisia, Doping*, University of California Press, 2005.
- J. Herbert, *Testosterone. Sex, power and the will to win*, OUP, 2015.
- C. Hooven, *Testosterone: The Story of the Hormone that Dominates and Divides Us*, Cassell, 2021.

Chemical and Biological warfare

- M. Sartori, *The War Gases*, Van Nostrand, 1939 (he worked for the Italian Chemical Warfare Service. Hard to find)
- L. F. Haber, *The Poisonous Cloud: Chemical Warfare in the First World War*, OUP, 1986 (author was son of the Haber, who ran the WWI German programme)
- R. Harris and J. Paxman, *A Higher Form of Killing*, Chatto and Windus, 1982 (new pbk edition, Arrow Books 2002)

- G. I. Brown, *The Big Bang*, Sutton, 1998.
- E. Croddy, *Chemical and Biological Warfare*, Copernicus Books, 2002.
- A. Mayor, *Greek Fire, Poison Arrows & Scorpion Bombs: Biological & Chemical Warfare in the Ancient World*, Gerald Duckworth & Co, 2003.
- R. Hutchinson, *The No-Nonsense Guide to Nuclear, Chemical and Biological Weapons Today*, Weidenfeld & Nicolson, 2003
- S. A. Feldman, *Poison Arrows: The Amazing Story of How Prozac and Anaesthetics Were Developed from Deadly Jungle Poison Darts*, Metro Books 2005.
- M. H. Freemantle, *Gas! Gas! Quick, Boys! How Chemistry Changed the First World War*, The History Press, 2012.
- M. H. Freemantle, *The Chemists' War: 1914-1918*, RSC, 2014.
- U. Schmidt, *Secret Science: A Century of Poison Warfare and Human Experiments*, OUP, 2015.
- D. Kaszeta, *Toxic: A History of Nerve Agents, from Nazi Germany to Putin's Russia*, OUP, 2021.

Colour and Chemistry

- L. R. Milgrom, *The Colours of Life: Introduction to the Chemistry of Porphyrins and Related Compounds*, OUP, 1997.
- S. Garfield, *Mauve: How One Man Invented a Color That Changed the World*, Faber, 2000.
- F. Delamare and B. Guineau, *Colour: Making and Using Dyes and Pigments*, Thames and Hudson, 2000.
- R. M. Christie, *Colour Chemistry*, RSC, 2001
- M. Pastoreau, *Blue: The History of a Color*, Princeton University Press, 2001
- P. Ball, *Bright Earth: The Invention of Colour*, Viking, 2001.
- V. Finlay, *Colour: Travels Through the Paintbox*, Sceptre, 2003.
- M. Pastoreau, *Black: The History of a Color*, Princeton University Press, 2008.
- D. Lee, *Nature's Palette: The Science of Plant Color*, University of Chicago Press, 2008.
- S. Bucklow, *The Alchemy of Paint: Art, Science and Secrets from the Middle Ages: Colour and Meaning From the Middle Ages*, Marion Boyars, 2009.
- M.-T. Dinh-Audouin et al, *La chimie et l'art, le génie au service de l'homme*, EDP Sciences, 2010 (• if you speak French)
- J. Balfour-Paul, *Indigo: Egyptian Mummies to Blue Jeans*, British Museum Press, 2011.
- M. Pastoreau, *Green: The History of a Color*, Princeton University Press, 2014.
- M. Pastoreau, *Red: The History of a Color*, Princeton University Press, 2016.
- Spike Bucklow, *Red. The Art and Science of a Colour*, Reaktion Books, 2016.
- M. Pastoreau, *Yellow: The History of a Color*, Princeton University Press, 2019.

Chirality and Asymmetry

- F. Close, *Lucifer's Legacy: The Meaning of Asymmetry*, OUP, 2000
- C. McManus, *Right Hand, Left Hand*, Weidenfeld and Nicholson, 2002.
- J. P. Riehl, *Mirror-Image Asymmetry: An Introduction to the Origin and Consequences of Chirality*, John Wiley, 2010.

Biomimicry and bio-engineering

- J. M. Benyus, *Biomimicry: Innovation Inspired by Nature*, William Morrow, 1997.
- P. Forbes, *The Gecko's Foot: Bio-inspiration - Engineering New Materials and Devices from Nature*, Fourth Estate, 2005.
- R. Allen (ed), *Bulletproof Feathers: How Science Uses Nature's Secrets to Design Cutting-Edge Technology*, University of Chicago Press, 2010.
- L. Brunetta and C. L. Craig, *Spider Silk: Evolution and 400 Million Years of Spinning, Waiting, Snagging, and Mating*, Yale University Press, 2010.

Explosives

- J. R. Partington, *A History of Greek Fire and Gunpowder*, Johns Hopkins University Press, 1998 (most recent ed.)
- G. I. Brown, *The Big Bang!: History of Explosives*, Sutton, 1998.
- J. Kelly, *Gunpowder: Alchemy, Bombards and Pyrotechnics: The History of the Explosive That Changed the World*, Basic Books, 2004.
- S. R. Bown, *A Most Damnable Invention: Dynamite, Nitrates, and the Making of the Modern World*, Thomas Dunne Books, 2005.
- C. Ponting, *Gunpowder: An Explosive History - from the Alchemists of China to the Battlefields of Europe*, Chatto and Windus, 2005.
- J. Akhavan, *Chemistry of Explosives*, RSC, 2011.
- S. Q. Field, *Boom!: The Chemistry and History of Explosives*, Chicago Review Press, 2017.

Archaeology and Chemistry

- A. M. Pollard and C. Heron, *Archaeological Chemistry*, RSC, 1996 (later edition available)
- J. B. Lambert, *Traces of the Past: Unraveling the Secrets of Archaeology Through Chemistry*, Addison-Wesley, 1998.
- M. Jones, *The Molecule Hunt: Archaeology and the Hunt for Ancient DNA*, Penguin 2001.
- T. A. Brown and K. Brown, *Biomolecular Archaeology: An Introduction*, Wiley, 2011.

DDT and insecticides

- T. F. West and G. A. Campbell, *DDT and newer persistent insecticides*, Chapman and Hall, 1950.
- R. Carson, *Silent Spring*, Houghton Mifflin, 1962.
- A. Hay, *The Chemical Scythe*, Plenum Press, 1982.
- R. Bate and L. Mooney, *Environmental Health: Third World Problems - First World Preoccupations*, Butterworth-Heinemann, 1999 (several chapters on DDT and organochlorine compounds)
- E. Russell, *War and Nature: Fighting Humans and Insects with Chemicals from World War I to Silent Spring*, Cambridge University Press, 2001.
- D. Kinkela, *DDT and the American Century: Global Health, Environmental Politics, and the Pesticide That Changed the World*, The University of North Carolina Press, 2011.
- F. R. Davis, *Banned: A History of Pesticides and the Science of Toxicology*, Yale University Press, 2015.
- Elena Conis, *How to Sell a Poison: The Rise, Fall, and Toxic Return of DDT*, Bold Type Books 2022.

Plastics

- M. E. Hermes, *Enough for One Lifetime: Wallace Carothers, Inventor of Nylon*, American Chemical Society, 1996.
- S. Fenichell, *Plastic: The Making of a Synthetic Century*, Harper Business, 1997.
- S. Handley, *Nylon: The Story of a Fashion Revolution*, Bloomsbury, 1999.
- W. Gratzer, *Giant molecules - from nylon to nanotubes*, OUP, 2009.
- S. Freinkel, *Plastic: A Toxic Love Story*, Houghton Mifflin, 2011.

How Scientific Research is done

- J. D. Watson, *The Double Helix: Personal Account of the Discovery of the Structure of DNA*, Weidenfeld and Nicolson, 1968 [more recent editions available, esp in paperback]
- F. Crick, *What Mad Pursuit: A Personal View of Scientific Discovery*, Basic Books, 1990.
- J. E. Baggott, *Perfect Symmetry: Accidental Discovery of Buckminsterfullerene*, OUP 1994 (paperback 1996)
- H. Aldersey-Williams, *The Most Beautiful Molecule: An Adventure in Chemistry*, Aurum Press, 1994 (paperback 1997) [the discovery of Buckminsterfullerene]
- G. Ferry, *Dorothy Hodgkin: A Life*, Granta Books, 1998.
- M. White, *Rivals. Conflict as the Fuel of Science*, Secker and Warburg, 2001.
- B. Maddox, *Rosalind Franklin: The Dark Lady of DNA*, Harper Collins, 2002.

M Wilkins, *The Third Man of the Double Helix: The Autobiography of Maurice Wilkins*, OUP, 2005.

R. Lee, *The Eureka Moment! 100 key scientific discoveries of the 20th century*, The British Library, 2002.

G. Ferry, *Max Perutz and the Secret of Life*, Cold Spring Harbor Laboratory Press, U.S, 2005.

P. Coffey, *Cathedrals of Science*, OUP, 2008. (scientific rivalries)

Perfumes and Smell

R. W. Moncrieff, *The Chemical Senses*, Leonard Hill, 1967.

L. Turin, *The Secret of Scent*, Faber 2006.

C. S. Sell (ed), *The Chemistry of Fragrances*, 2nd edition, RSC, 2006.

D. Wilson and R. J. Stevenson, *Learning To Smell*, John Hopkins, 2006.

A. Gilbert, *The Nose Knows*, Crown Publishers, 2008.

L. Turin and T. Sanchez, *Perfumes: the Guide*, Viking, 2008 (they have more recently done a select book of 100)

T. J. Mazzeo, *The Secret of Chanel No 5: The Biography of a Scent*, Harper Collins, 2010.

B. Herman, *Scent and Subversion*, Lyons Press, 2013.

C. S. Sell, *Chemistry and The Sense of Smell*, John Wiley, 2014.

P. Pelosi, *On the Scent: A Journey through the Science of Smell*, Oxford University Press, 2016.

K. Schögel, *The Scent of Empires. Chanel No. 5 and Red Moscow*, Polity, 2021.

E. V. Pearlstine, *Scent: A Natural History of Fragrance*, Yale University Press, 2022

Toxicology

J. Timbrell, *The Poison Paradox: Chemicals as Friends and Foes*, Oxford University Press, 2005.

R. H. Waring, G. B. Steventon and S. C. Mitchell (eds), *Molecules of Death*, London, Imperial College Press, 2nd edition, 2007.

Vil Mirzayanov, *State Secrets: An Insider's Chronicle of the Russian Chemical Weapons Program*, Outskirts Press, 2008 (nerve agents, inc. Novichok agents) .

A. Vaksberg, *Toxic Politics: The Secret History of the Kremlin's Poison Laboratory - From the Special Cabinet to the Death of Litvinenko*, Santa Barbara, Praeger, 2011.

A. Stewart, *Wicked Plants: The A-Z of Plants That Kill, Maim, Intoxicate and Otherwise Offend*, Timber Press, 2010.

K. Harkup, *A is for Arsenic: The Poisons of Agatha Christie*, Bloomsbury, 2015

Forensic chemistry and Heavy Metal Poisoning

B. H. Kaye, *Science and the Detective: Selected Reading in Forensic Science*, Wiley VCH, 1995.

P. C. White (ed), *Crime Scene to Court*, RSC, 2010 (3rd ed.)

N. McCrery, *Silent Witnesses*, Random House, 2013.

C. Warren, *Brush with Death: A Social History of Lead Poisoning*, Johns Hopkins University Press, 2000.

G. Markowitz and D. Rosner, *Deceit and Denial: The Deadly Politics of Industrial Pollution*, University of California Press, 2003.

L. Denworth, *Toxic Truth: A Scientist, a Doctor, and the Battle over Lead*, Beacon Books, 2009.

S. Barrett, *The Arsenic Milkshake: And Other Mysteries Solved by Forensic Science*, Doubleday, 1994

A. A. Meharg, *Venomous Earth: How Arsenic Caused The World's Worst Mass Poisoning*, Palgrave Macmillan, 2004

J. C. Whorton, *The Arsenic Century: How Victorian Britain was Poisoned at Home, Work, and Play*, OUP, 2011.

S. Hempel, *The Inheritor's Powder: A Cautionary Tale of Poison, Betrayal and Greed*, Weidenfeld & Nicholson, 2013.

Bad Science

W. Gratzer, *The Undergrowth of Science: Delusion, Self-deception and Human Frailty*, Oxford 2000.

R. L. Park, *Voodoo Science: The Road from Foolishness to Fraud*, Oxford, 2000.

H. F. Judson, *The Great Betrayal: Fraud in Science*, Houghton Mifflin, 2004.

S. Singh and E. Ernst, *Trick or Treatment? Alternative Medicine on Trial*, Bantam Press, 2008

B. Goldacre, *Bad Science*, HarperPerennial, 2009.

D. Goodstein, *On fact and Fraud: cautionary tales from the front lines of science*, Princeton UP, 2010.

P. A. Offit, *Do you believe in Magic?* Harper, 2013 (alternative medicine)

S. Ritchie, *Science Fictions: How Fraud, Bias, Negligence, and Hype Undermine the Search for Truth*, Metropolitan Books, 2020.

Cold Fusion

G. Taubes, *Bad Science: The Short Life and Weird Times of Cold Fusion*, Random House, 1993.

J. R. Huizenga, *Cold Fusion: The Scientific Fiasco of the Century*, OUP, 1994.

Simon Cotton
June 2023