

CHEMISTRY BOOK LIST FOR BACKGROUND READING

Simon Cotton has kindly produced this *condensed* list of books that are suitable for reading around the subject by A Level Chemistry students and their teachers.

An attempt has been made to group this selection of books 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].

B. Selinger, *Chemistry in the Market Place*, Harcourt Brace, 5th edition, 1998.

P. Le Couteur and J. Burreson, *Napoleon's Buttons: How 17 Molecules Changed History*, Tarcher, 2003.

Brigitte Proust, *Petite géométrie des parfums*, Paris, Seuil, 2006. (• if you speak French).

S. A. Cotton, *Every Molecule Tells A Story*, CRC Press, 2012.

Popular Chemistry

Anything by John Emsley or Joe Schwarcz, for example:

J. Emsley, *The Consumer's Good Chemical Guide*, W.H.Freeman, 1994.

J. Emsley, *Molecules at an Exhibition*, Oxford, 1998.

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. 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.

Chemistry of Food

H. McGee, *On Food and Cooking*, Harper Collins 1986; second (enlarged) edition published 2004.

Periodic Table

P. W. Atkins, *The Periodic Kingdom*, Weidenfeld and Nicholson, 1995.
Primo Levi, *The Periodic Table*, Everyman's Library, 1995 (other editions available).
J. Emsley, *Nature's Building Blocks*, Oxford, 2001.

The Atmosphere, water etc.

Philip Ball, *H₂O: A Biography of Water*, Phoenix, 2000.
N. Lane, *Oxygen: The molecule that made the world*, OUP, 2002.

Nitrogen, Ammonia and Fertilisers

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

Pheromones and chemistry in living things

W. C. Agosta, *Chemical Communication*, Scientific American Library, 1992.
T. Eisner, M. Eisner and M. Siegler, *Secret Weapons: Defenses of Insects, Spiders, Scorpions, and Other Many-Legged Creatures*, Belknap Press, 2007.

Medicinal Chemistry and medicinal molecules

G. L. Patrick, *An Introduction to Medicinal Chemistry*, 2nd edition, Oxford, 2001 (other editions too).
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.

Drugs and chemistry

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 Euphorians*, RSC, 2009.
B. Sahakian and J. N. LaBuzetta, *Bad Moves: How decision making goes wrong, and the ethics of smart drugs*, OUP, 2013.

Drugs and Sport

C. Cooper, *Run, Swim, Throw, Cheat: The science behind drugs in sport*, OUP, 2012

Chemical and Biological warfare

G. I. Brown, *The Big Bang*, Sutton, 1998.

Why Reactions Happen

J. Keeler and P. Wothers, *Why Chemical Reactions Happen*, Oxford, 2003

Explosives

G. I. Brown, *The Big Bang!: History of Explosives*, Sutton, 1998.

Biomimicry and bio-engineering

R. Allen (ed), *Bulletproof Feathers: How Science Uses Nature's Secrets to Design Cutting-Edge Technology*, University of Chicago Press, 2010.

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.

Forensic chemistry and Heavy Metal Poisoning

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

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.

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

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