

One foot candle: A naive biochemist's view of some basic science

For those who have learnt only SI units, the title of this page may need some explanation.

The foot candle is an obsolete unit of illumination (now called illuminance) - the illumination provided by a standard candle one foot (0.3048 m) away from the object illuminated.

One foot candle=1 lumen / square foot

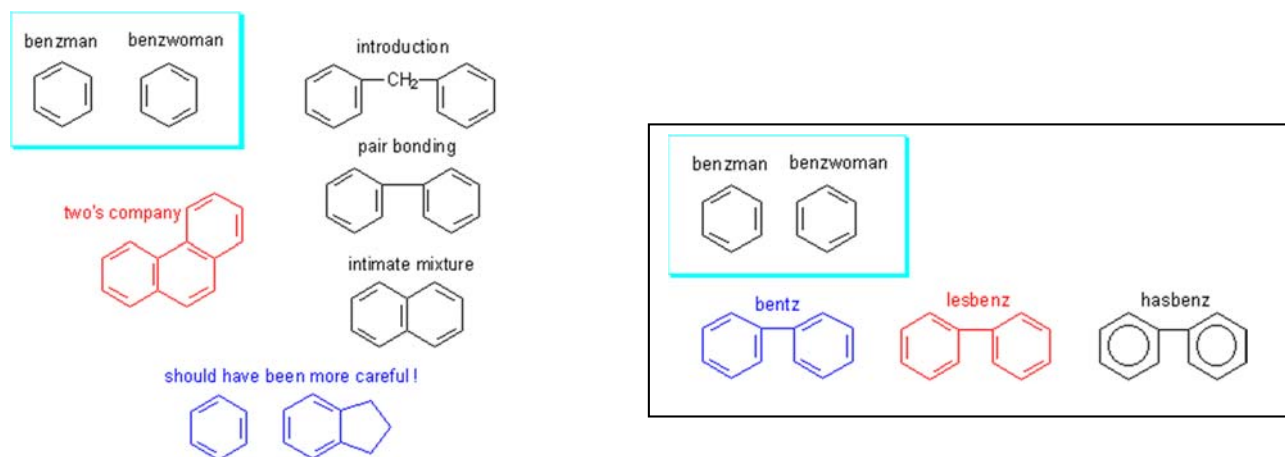
The SI unit of illuminance is the lux: 1 foot candle=10.764 lux



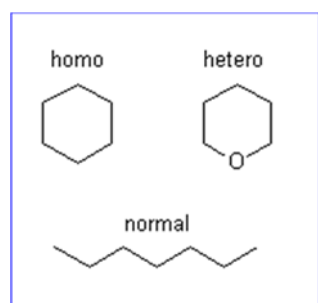
The original idea for these drawings came to me while I was a student at the University of Birmingham in 1965, and this page is humbly dedicated to Dr 'Benzene' Jones who inspired me, by his rapid drawing of benzene rings, and his random alternation between the Kekulé structures, to think about the meaning of the rings as he drew them.

Over the years others have added to my original set of drawings, and I am grateful to all those who have helped me to enjoy my attempts at making chemistry more accessible to myself and other biologists.

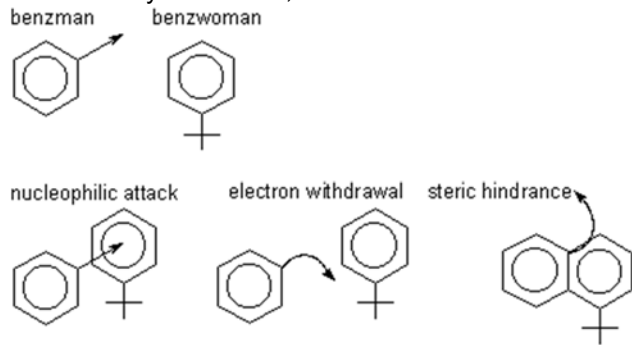
Here goes with the benzene rings, starting with the assumption that you can assign gender to the Kekulé structures:



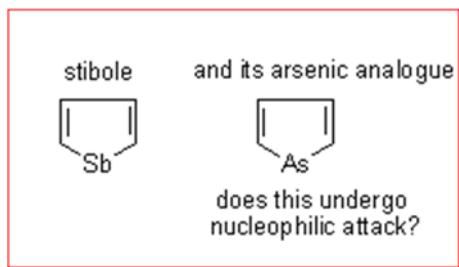
And going on to worry a little about chemists' definitions:



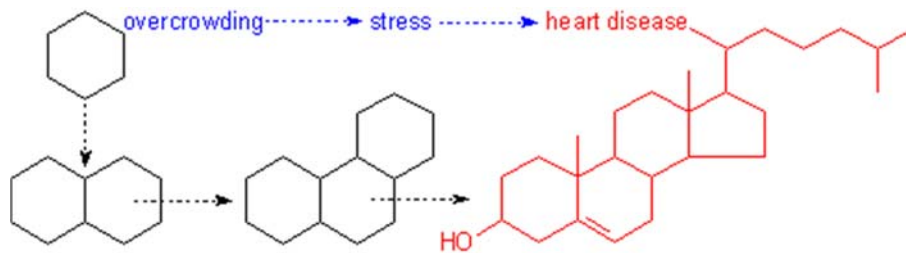
We can vary the theme, and think about reaction mechanisms:



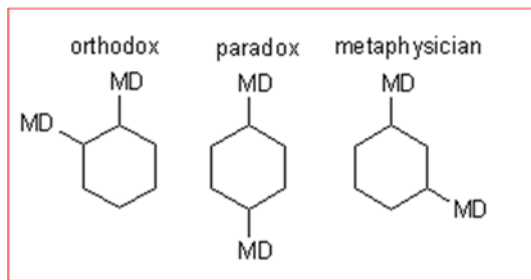
Which leads us to some speculation about:



All of this does, of course, have relevance to biochemistry and medicine:

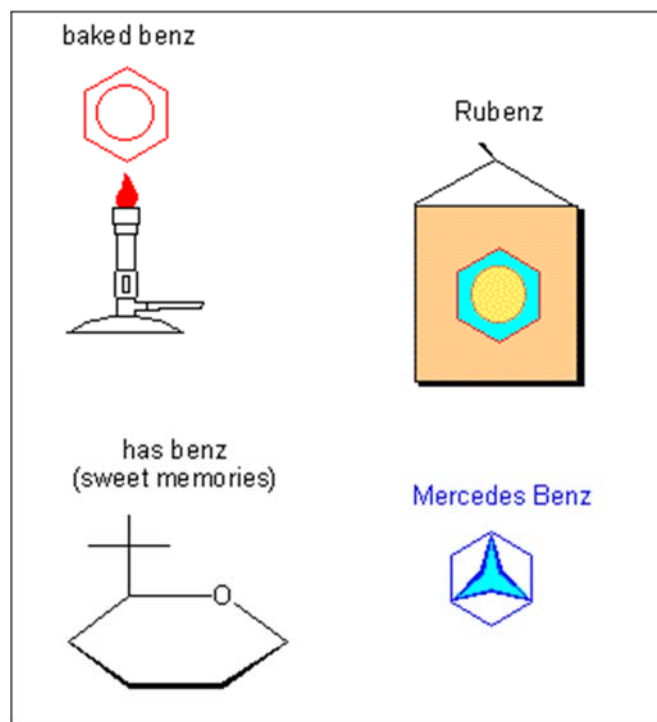


and indeed to medics themselves:



But never forget:





And finally a mathematical appendix:

$$\int (e)^x = f(u)^n$$