Module 2: The Acidic Environment

Some general comments

The actual content of this module is fairly similar to that of the Acids and Bases section of the pre-1999 syllabus, though the treatment is different – its much more real-world and applications oriented, and includes an additional smattering of history. Quantitative aspects of equilibrium have been deleted.

Again the module does not form a tightly-knit whole – the inclusion of esters seems more intended to fill up the module's 30 hours rather than enlarge the treatment of acids in the environment. There seems to be no compelling reason for sticking calculations involving molar volumes of gases in the middle of this module (other than that there wasn't enough time to do it in Module 2 of the preliminary Course?). *CC* leaves this where it is in the syllabus, because there doesn't seem to be a more logical place for it!

The module starts with an operational or pragmatic or experimental approach to acids and bases and their occurrence and roles in our environment: this is Sections 1, 2 and 3 of the syllabus (and Chapter 4 of *CC*). The syllabus then turns to an interpretative or theoretical approach to acids, particularly the Brönsted-Lowry concepts; it uses these to discuss volumetric analysis and buffers, then heads off at a tangent to treat alkanoic acids and esters. All this is treated in Chapter 5 of *CC*.

The syllabus uses the discussion of acidic oxides as an opportunity to introduce Le Chatelier's principle. Remember that the basic ideas of chemical equilibrium were introduced in Module 3 of the Preliminary Course (pages 208–10 of *CCPC*).