BOOK REVIEW

WHITE,, W. M. 2013. *Geochemistry*. 668pp. Wiley-Blackwell. Price £75.00, €90.00 (HB); £37.50, €46.50 (PB); £46.87, €56.30 (e). ISBN 978 0 470 65667 9 (HB); 978 0 470 65668 6 (PB); 978 1 118 64682 3 (e). doi:10.1017/S0016756813000708

This > 600 page book is probably the most comprehensive account of geochemistry in almost all aspects with very detailed introductions to fundamental concepts as well as applications to understanding relevant Earth processes of varying nature. This is done in 12 chapters and includes basic concepts of thermodynamics, solution models that apply thermodynamic principles to complex natural systems, kinetics, elemental behaviours in both low-temperature aquatic systems and high-temperature magmatic systems, principles of radiogenic and some non-radiogenic isotopes and their applications, and a final chapter on organic geochemistry. Each chapter is followed by references and suggested readings as well as problem questions for readers who may choose to work on them so as to consolidate what has been learnt, although it would be better if answers to these problem questions were given. Because the book is so comprehensive and so thick, it is unlikely that it will be used as a geochemistry textbook at any level in any Earth Sciences department today. However, it would be an excellent reference book for geoscientists, whether they are professionals or postgraduate students.

The author is a highly respected geochemist with significant original research contributions using trace element and isotope geochemistry to understand the petrogenesis of magmatic rocks in various geological settings, including mid-ocean ridge basalts (MORB), subduction-related island arc basalts (IAB) and intra-plate ocean island basalts (OIB). So, the author is considered one of the authorities in these research areas. Hence, Chapter 11 contains very original research contributions by the author. However, there is a downside. Some treatments and views in Chapter 11 are biased. The petrogenesis of MORB and OIB is not nearly like the 'facts' as discussed in the book, but remains controversial and different interpretations, which are excluded in the book, may be more correct than those given in the book. For a scientific reference book, an objective account is essential. Nevertheless, overall this is a comprehensive and useful geochemistry reference book, although I recommend readers treat Chapter 11 with caution.

Yaoling Niu
Durham University