Editorial 68

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The issue opens with the first part of an article by the Spanish author Miguel Escribano-Cabeza on Leibniz's views on chemistry. Unfortunately, the second part of this article was published first by mistake in the previous issue of the journal. Our apologies to the author for this oversight which was not spotted in time.

Rene Vernon from Australia appears next, with an in-depth analysis of the ongoing debate as to the membership of group 3 of the periodic table. I would suggest that readers might also consult another recent article on this topic, which appeared in the official IUPAC magazine *Chemistry International* (Scerri 2021).

Another contribution concerning the periodic table is provided by Yoshiteru Maeno and his colleagues from Japan. These authors examine various forms of the periodic table, as well as an interesting relationship between the magic numbers pertaining to the familiar atomic periodic table and those from the periodic table of nuclei.

Yet a third article on the periodic table comes from the Marks brothers (not Marx), one of whom is based in England and the other in Austria. These authors argue for a return to a chemistry based periodic table, rather than one dominated by physics, and thereby claim to clarify the debated position of hydrogen in the periodic table.

Ceth Lightfield's from California writes about algorithmic chemistry. Whereas previous work in this field has been based on a fixed formalism, Lightfield's own system-based approach draws on a proof theoretical rules to ensure a better fit between the logic used and the target system. The proposed methodology is illustrated by appeal to simple displacement reactions in chemistry.

Geoffrey Neuss is an educational consultant based in the UK and the author of a well-respected textbook for the International Baccalaureate in Chemistry (Neuss 2007). In the current issue he subjects my own account of the relative occupation and ionization in transition metal atoms to close scrutiny, and asks whether one can really claim that metals like scandium are ionized by the loss of 4s-orbital electrons in preference to those in 3d orbitals. This is followed by my response to Neuss' article in which I attempt to uphold this claim.

The following article is by the chemical educator Kevin De Berg, who is also based in Australia and who has written extensively on the nature of science. His paper examines the question of incomplete reactions such as one involving iron(III) thiocyanate and its epistemological implications in the field of education.

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The final feature article, but far from being the least interesting, is by David Dunmur an expert on liquid crystals who previously held research positions at the universities of Sheffield and Southampton in the UK and who is the author of several books on liquid crystals (Dunmur 2014). In his article Dunmur comments on a recent paper in the journal by Zwart who in turn analyzed the influence of liquid crystal research on the poetry of Gorter. Dunmur brings his knowledge of liquid crystals and literature together to ask to what extent, if any, literature influences science or in the words of Gorter, “can poetry become science?”. Dunmur also gives an interpretation of the ideas from liquid crystal science in the context of Gorter’s poem *Pan* as well as the use of the phrase “liquid crystal” in classical literature.

The issue closes with two book reviews. The first is by the well-known historian and philosopher of science Alan Chalmers, (based in Australia), who examines the new book on Robert Boyle by our own book review editor Marina Banchetti. The second book review, by your editor-in-chief, comments on a new book about the periodic table that was recently published by Geoffrey Rayner-Canham.

References

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