
Editorial

In my last editorial, I explained that in order to cope with the large number of papers that were being submitted to *Proc. R. Soc. A*, every paper we received would be pre-assessed by a member of the Editorial Board, and referees for papers that passed this hurdle were asked to apply stringent quality standards. These procedures, initiated by my predecessor Trevor Stuart, have now proved successful in several ways. Referees no longer waste time reporting on papers that have no chance of being accepted—sometimes because they are poor, but more often because although they contain good science their content is deemed suitable for a more specialist journal. Publication has been greatly accelerated: the current receipt to acceptance time is 90 days. Moreover, the rejection rate has been brought down from an unrealistic height of more than 80 per cent to a more reasonable 72 per cent (getting the right rate is delicate: with 100 per cent, nobody would submit papers; with 0 per cent, we would be publishing trash).

These improvements would not have occurred without the efforts of Joanna Harries and Louise Gardner in the journal office, the Society's publications production staff and, of course, indispensable advice from the Editorial Board.

Proc. R. Soc. A aims to publish papers across the whole of the physical sciences. I am interpreting this very widely. Recently, we have published serious scientific studies of a painting by Monet (interpreting the position of the sun to determine where and when it was painted; Baker & Thornes 2006), Viking navigation (to determine whether they could have used the polarization of skylight; Hedegus *et al.* 2007), erasing toner on office paper (to enable it to be re-used; Counsell & Allwood 2009), stability of the Millennium bridge (MacDonald 2009), dynamics of golf swings (Sharp 2009), efficiency of gaits (Srinivasan & Ruina 2007), stresses (in the cork) during the opening of wine bottles (De Pascalis *et al.* 2007), etc. These outliers supplement our core papers, reporting substantial, occasionally seminal, advances in quantum physics, engineering, information science, materials science, pure and applied mathematics, and chemistry (for which we are at last starting to attract papers in numbers commensurate with the scientific importance of that subject).

A curse of researchers, publishers and editors is the fashionable emphasis on bibliometric indicators. Chief among these evils is the impact factor. Ours is increasing but still rather low (currently 1.7). But the impact factor is a measure only of short-term success (citations over the preceding 2 years); for *Proc. R. Soc. A*, a better indicator is the citation half-life. Ours is off-scale: greater than ten years, reflecting our aim of publishing slow-burning, long-lasting, papers.

In this anniversary year, celebrating 350 years since the foundation of the Royal Society, we plan to publish a series of invited articles, contributed by world-leading authorities across the range of subjects that we cover. The first

of these, ‘Nanostructured Bainite’, by H.K.D.H. Bhadeshia (Bhadeshia 2010), appears in this issue. These articles will reinforce our position as one of the best, as well as the oldest, journals of physical science.

Michael Berry

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