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EDITORIAL

Looking Back to Look Forward

Richard Blackburn *Reviews Editor* and Andrew Towns *Editor-in-Chief*

Coloration Technology's roots reach back nearly 140 years. The SDC established the previous guise of the journal in 1884 to disseminate knowledge relating to colour, colorants and coloration. Its mission lives on in the research papers that appear within the pages of each new issue of *Coloration Technology*. No less important are the reviews that sit alongside them, expertly consolidating and critiquing the literature. Many measures of the importance and topicality of the information appearing in a journal's volumes exist. You may already be familiar with one of them: Impact Factor (IF). Although an imperfect indicator of the quality of content, it constitutes a metric that is much used by authors, funding bodies and publishers [1]. IF is the ratio of the total number of citations attracted by the preceding two years' worth of papers to the total number of papers published during those same two years. It thus acts indirectly as a measure of the value that other researchers place upon these papers on the basis that higher quality, more topical work will quickly attract greater numbers of citations. IF is also used as a metric for assessing the quality of research in higher education institutions by government authorities, such as the Research Excellence Framework (REF) system in UK; the IF of journals where University authors publish their 'best' research is taken into account in assessing research quality.

Figure 1 depicts the substantial rise in *Coloration Technology*'s IF during the past two decades. The latest IF is the highest ever reported, having trebled in size since the turn of the millennium. This increase is testament to the efforts of those connected to the journal directed at selecting the best submissions for publication as well as providing the constructive criticism that assists authors in further improving the quality of their manuscripts. Not only is this sustained climb in IF gratifying, but so too is the size of last year's Volume (no. 137) of *Coloration Technology*. Its page count of technical content grew to the largest of any year in the journal's history.

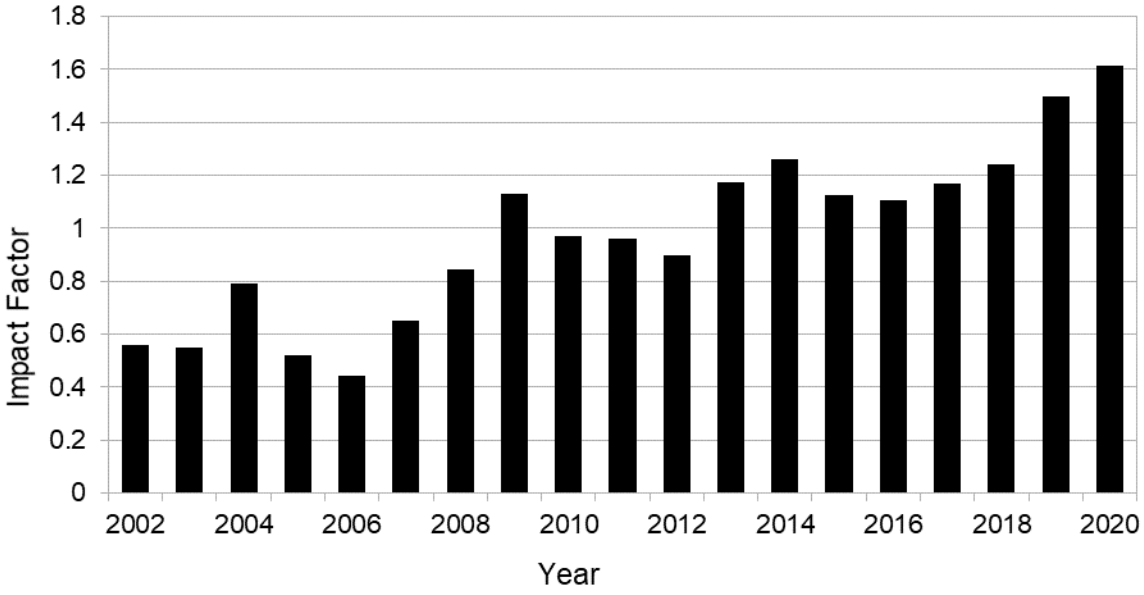

Figure 1 IF of *Coloration Technology* for 2002–2020

In addition to research papers reporting significant advances in coloration, high quality review papers have also contributed significantly to IF: the past year has seen the publication of several that ought to pique considerable interest within the coloration community. An excellent example is Professor Stephen Burkinshaw's two-part treatise on the role of electrolyte in the dyeing of cellulosic substrate. It is a subject of enormous economic and ecological importance owing to the large annual volume of cotton, viscose and related textile materials dyed in the presence of substantial quantities of electrolyte. In the first of his two papers [2], he sets out the current state of conventional wisdom, which he then compellingly challenges in the second [3]. For many years, the prevailing view has been that the inorganic salt added to dyebaths promotes exhaustion by countering the electrostatic interaction between anionic dyes and the negative charge which cellulosics develop in aqueous environments. Prof. Burkinshaw presents a convincing thesis that electrolyte drives uptake by lowering colorant solubility in the dyebath instead. Anyone involved in coloration of cotton and viscose should take a look at these two papers and reconsider the mode of action of salt during the application of reactive, direct, vat and other dye types. This work richly deserves the latest awarding of the Centenary Medal, which is an annual honour bestowed by the SDC on what it considers to be the best review to appear in *Coloration Technology* during the previous year.

Another recent review [4] to contest generally accepted viewpoints concerns use of reactive dyes as functional colorants in histology. Its lead author, Dr Richard Horobin, is a renowned expert in the field: he and his co-authors demonstrate why great care must be exercised when interpreting observations made using this class of colorant. They also build a case for more rigorous reporting of experimental information of studies which employ them, because the conventional level of detail is typically insufficient to make sense of the behaviour of reactive dyes within a cellular environment. Other reviews to appear in the last year tackle subjects that are of importance to diverse fields of coloration: research to treat coloration industry wastewater [5], developments in oxidative colorants for the permanent dyeing of hair [6], modification of pigment dispersion properties through encapsulation [7] and technologies that greatly reduce water usage in dyebaths [8].

The journal commissions high quality reviews through its Reviews Editor, Professor Richard Blackburn, but also welcomes submission of unsolicited review papers. Unfortunately, few of the latter type of manuscript go on to be accepted for publication because they exhibit common flaws.

One of the most common flaws in unsolicited reviews received in recent years is the subject matter. Of course, any review that relates to colour, colorants and coloration is welcome, but the content of many reviews received does not go beyond what is readily available in textbooks, including several SDC titles. To refer back to Professor Burkinshaw's reviews on the role of electrolyte in the dyeing of cellulosic substrate, it could be argued that many textbooks cover this subject. However, what makes these reviews high quality and fitting for the journal is the inclusion of content that goes beyond the basic science of the subject, and provides significant detail only available by researching and compiling multiple original articles from a range of sources. These reviews also critically analyse the literature and provide a new perspective on the subject that goes beyond existing publications. They furnish an insightful look back into the past and at the present, which is not afforded elsewhere, while also acting as a vantage point from which readers can look forward to survey new possibilities – perhaps being inspired to create their own.

Coloration Technology is seeking reviews that demonstrate the progress which has been made in relevant subjects in recent years. Some reviews cover singular or limited examples of recent work and focus mainly on literature reviews of research that is over 10 years old. Whilst a historical context is welcome and appropriate for many reviews, this is only useful if contemporaneous research and future perspectives are also included. Take for example another recent winner of the

SDC Centenary Medal, Dr. Tom Coultate and Professor Richard Blackburn's review of food colorants [9]. This review covers the subject back into the 18th Century with a fascinating – and horrifying – account of how synthetic colorants were once used. The authors then move onto the current state of food coloration in terms of where it had evolved from, and the directions in which it is likely to go next. They concentrate on naturally-derived dyes and the evolution of producing such colorants over the past 10 years and where this technology is going in the future. Each part of the review – past, present, future – was thoroughly researched and critically analysed. Importantly, it provides a wide-range view of research of recent times, much of which is absent in other reviews or textbooks on the subject.

The quality of *Coloration Technology* reviews is reflected in citations. According to Web of Science, over the period 2002–2020 reviews in the journal received an average of 29.4 citations each; in comparison regular articles received an average of 11.4 citations each over the same period. It is easy to see how important reviews have been in their contribution to the increase in IF of the journal. This rise is driven by publication of reviews that will interest readers and result in citations in future publications on related subjects.

While the rise in IF is gratifying given the hard work put in by its editorial staff and referees, the intention is not to rest on laurels. It would be great to see your high quality research papers or reviews contributing to further growth in *Coloration Technology*'s IF. We will be delighted to discuss potential review submissions – please get in touch with Professor Blackburn (r.s.blackburn@leeds.ac.uk) about yours!

References

1. E Garfield, The History and Meaning of the Journal Impact Factor, JAMA 295 (2006) 90-93.
2. SM Burkinshaw, The role of inorganic electrolyte (salt) in cellulosic fibre dyeing: Part 1 fundamental aspects, Color. Technol. 137 (2021) 421-444.
3. SM Burkinshaw, The role of inorganic electrolyte (salt) in cellulosic fibre dyeing: Part 2 theories of how inorganic electrolyte promotes dye uptake, Color. Technol. 137 (2021) 547-586.
4. RW Horobin, JC Stockert and H Zhang, Reactive dyes for living cells: Applications, artefacts, and some comparisons with textile dyeing, Color. Technol. 138 (2022) 3-15.
5. S Liu, CKY Lo and C-W Kan, Application of artificial intelligence techniques in textile wastewater decolorisation fields: A systematic and citation network analysis review, Color. Technol. 138 (2022) 117-136.
6. A Towns, A review of developments in industrial hair colorant actives for oxidative dyes, Color. Technol. 137 (2021) 301-335.
7. B Tawiah et al., An overview of the science and art of encapsulated pigments: Preparation, performance and application, Color. Technol. 138 (2022) in press. COTE12597
8. V Bairabathina et al., A review on reverse micellar approach for natural fibre dyeing, Color. Technol. 138 (2022) in press. COTE12605
9. T Coultate and RS Blackburn. Food colorants: their past, present and future. Color. Technol. 134 (2018) 165-186.