

CHEMISTRY OF MATERIALS

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Editorial

State of the Journal

It has become a "tradition" at the beginning of each calendar year to present an editorial report to our readers and contributors detailing the current status of the journal and to indicate possible future directions and trends. This year, the duty falls to me and I shall endeavor to bring you up to date on several issues. First, I am happy to report that, as a field, materials chemistry is booming. Nothing could be more indicative of the vitality and vibrancy of this field than the summary of the publication activity that is depicted in Figure 1. One year ago, in this forum John Greedan¹ reported that the number of manuscripts submitted to *Chemistry of Materials* was increasing dramatically. This rapid growth has obviously continued over the past year. Note that the data for 2005 is an extrapolation based on the number of papers received as of the end of October. When the final figures are in, it appears that the number of manuscripts submitted this year will exceed 2900. This is an increase of over 460 manuscripts, or 19% above last year. Of course, overall the present situation has to be considered a blessing to the field and a bonanza of new material for publication in the journal. However, as I hope to indicate in this article, along with the benefits of such a large increase in submissions, several issues have also arisen with which the journal is struggling to address. The first question that presents itself is the reason this substantial increase in submissions is occurring. A partial rationale for this observed trend is that there has been a basic shift in academic, governmental and industrial research institutions from traditional academic blue-sky type research toward more applied activities. Added impetus to this shift is provided by the funding agencies that favor current materials related fields such as nanotechnology, biomaterials, molecular electronics, photonic materials and composites, to name a few. It is also interesting to note that the upswing in manuscript submissions has its inception starting about the mid-1990s and that this coincides with the removal of many of the previous political and social barriers to publication that had their origins in the era of the cold war.

Today, we are experiencing a global exchange of ideas and technology. As a result, *Chemistry of Materials* has become a truly international journal. This is revealed by considering the origins of the papers published by the journal. As shown in Figure 2, just 10 years ago, 59% of the articles published originated from the U.S. Today, the U.S. contribution has declined to 28%. Over the past 10 years we have seen marked gains in the number of contributed papers from Europe and Japan. However, the most impressive growth over this same time period has come from the rest of Asia (mainly China and India) in which the number of papers published in *Chemistry of Materials* has increased fivefold. Citing China alone, in 1995 only 3 papers were published, while thus far in 2005, 51 articles have appeared in the journal.

Returning to Figure 1, one response to the avalanche of manuscripts that the journal is receiving is simply to publish more papers. As indicated in Figure 1, we have, to some extent, done this and the number of published papers has increased incrementally each year, along with an increase in the number (and frequency) of our print issues from 12 to 26 per year in 2003. This year, the number of papers published in *Chemistry of Materials* will increase by 25% over 2004. Nonetheless, the gap between submissions and publications is continuing to widen and a more satisfactory solution must be found. Of course, we realize that the growth rate depicted in Figure 1 cannot be sustained over the longer term, and at some point, the number of submissions should plateau. However, at this point in time, we have no indication when or at what level this will happen.

Since it is clearly not possible for *Chemistry of Materials* to publish all the "good" articles it receives, a policy decision has been made to publish only those manuscripts that provide a "significant advance" in a given area. This policy was outlined in detail in a previous editorial² by Editor-in-Chief Leonard Inter-

(1) Greedan, J. E. *Chem. Mater.* **2005**, *17*, 1.

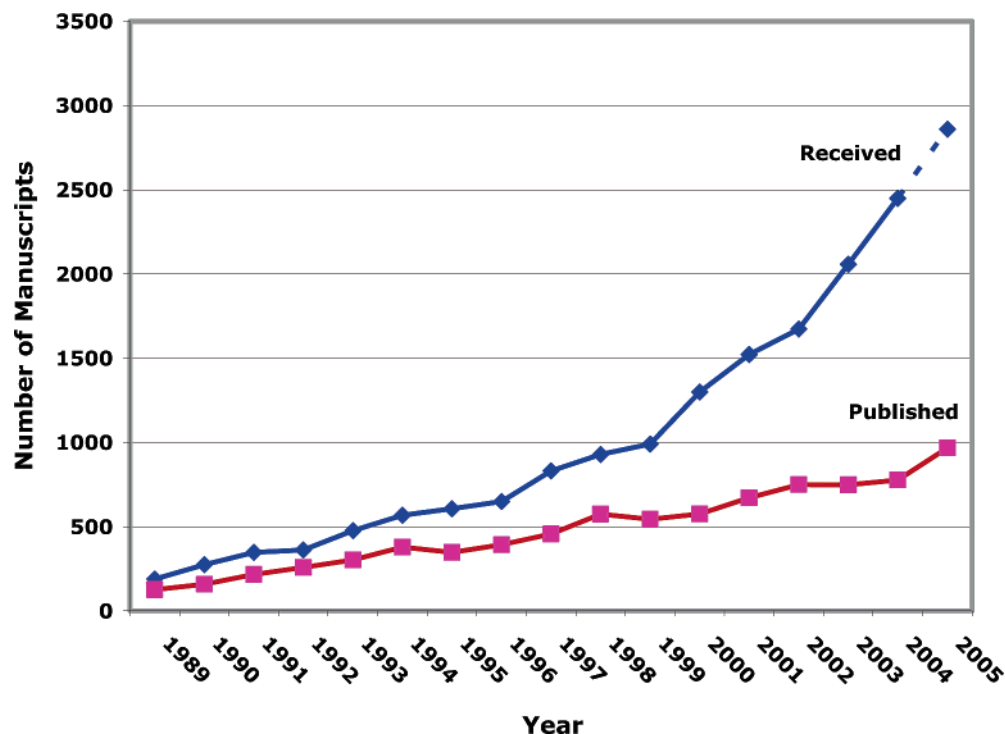


Figure 1. Manuscripts received and published in *Chemistry of Materials* from 1989 to 2005.

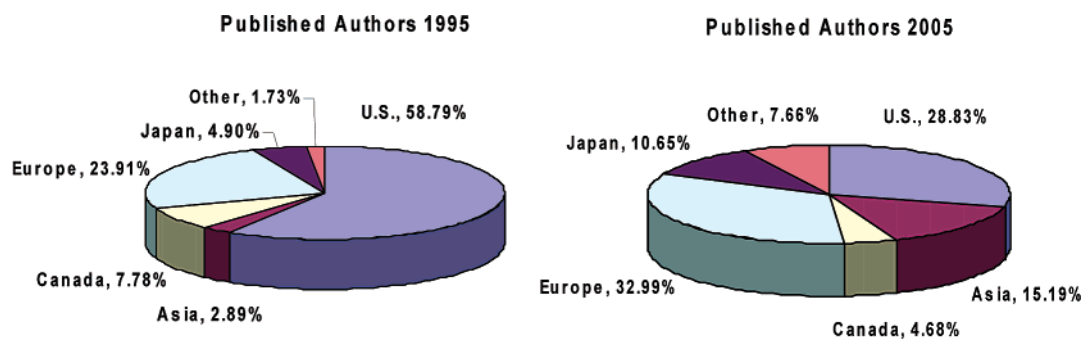


Figure 2. Comparison of the regional origins of papers published in *Chemistry of Materials* in 1995 and 2005.

rante and was implemented starting in calendar year 2003. The policy expresses the commitment of *Chemistry of Materials* to bring to its readers the best and latest breaking developments in all fields of materials chemistry. The efficacy of this policy is most apparent in the consistent rise in the impact factor for *Chemistry of Materials* over the past 10 years and particularly in the last 2 years (current value 4.10). At the same time, *Chemistry of Materials* has been rated the number one journal in materials science over the past 10 years on the basis of the overall number of citations as well as the number of citations per article. In 2004, there were 26,511 citations amounting to a 15% increase over 2003. *Chemistry of Materials* increasingly is the highest profile journal in the area of materials chemistry in which to publish articles, and it is for this reason that the journal is receiving such a large influx of manuscript submissions.

All progress comes at a cost. The sheer volume of manuscript submissions has placed a considerable strain on the editorial staff. As a result, Peter D. Battle from Oxford University, U.K., has joined the journal as an editor starting at the end of this past year. Prof. Battle brings to the journal much needed expertise in fields relating to the structure and properties of inorganic materials. To further augment the rapid processing of manu-

scripts, the appointments of two additional editors will be made in 2006. The increased volume of manuscripts also places added stress on the peer review process. Ultimately, we depend on the generous contribution of the time and expertise of our reviewers to provide advice to the editors for accepting or rejecting manuscripts. We recognize that this critical resource is finite and, consequently, that it should be carefully reserved for the review of only the best publishable manuscripts. This means that the editorial staff must assume the responsibility of conducting a preliminary review of all submitted articles. At the same time, we realize that, in some instances, authors may object to the fact that their articles were rejected without a peer review. In such cases, we request that the authors involved please consider the dilemma that we face and also recognize that other, first-rate scientific journals have adopted this policy some time ago.

Along with the rise in the number of manuscript submissions, our journal, together with other journals in the field, is currently experiencing a disturbing increase in the incidence of various types of author ethical misbehavior.³ Over the past year, several cases of duplicate or multiple manuscript submission, plagiarism and incremental publication have been documented. The edito-

(2) Interrante, L. V. *Chem. Mater.* **2003**, *15*, 1.

(3) Interrante, L. V.; Reichmanis, E. *Chem. Eng. News* **2005**, *83* (26), 4–6.

rial staff of *Chemistry of Materials* is committed as much as possible to intercepting and discouraging such misbehavior. As a consequence, we are conducting online author and topical searches in addition to instituting other validation measures as part of the manuscript review and evaluation process. Regrettably, in the most egregious cases of ethical misbehavior, the authors were disciplined by banning them from publishing in *Chemistry of Materials* for a specified number of years. The activities to detect such misbehavior are highly time-consuming but appear necessary at this time to ensure the continued credibility of the journal and our contributors. We request our reviewers and readers also to be vigilant and to assist us in holding authors to the highest ethical standards as detailed in the guidelines established in 2000 for publication in all American Chemical Society journals.⁴

Together with a continuing emphasis enhancing the quality of the papers published in *Chemistry of Materials*, we remain focused on our goal of providing a rapid turn-around time in reaching a decision for or against the publication of a submitted article. Currently, this requires, on the average, 2 months with accepted papers appearing in print in under 5 months from the date of receipt. The slowest step in this process lies almost invariably in obtaining the comments of the reviewers. Our

commitment to the goals of reducing the time to publication occasionally requires us to “gently prompt” reviewers by e-mail to submit their reviews when they are overdue. At such times, we request your understanding and indulgence. Contributing authors should also be aware that it is not always easy to recruit a slate of competent reviewers for their papers. At the present time, it is not uncommon to approach six or even eight reviewers to obtain two or three reviews. In some cases, editors have been required to make decisions on whether to accept a paper based on a single review to avoid further delays in the manuscript review process. Even if you are approached and decide to decline to review a paper, we would appreciate your informing us soon as possible so that an alternate reviewer can be assigned. In the view of this editor, if you publish in *Chemistry of Materials*, you also incur some responsibility to review for the journal. As always, we are most grateful for our readers, contributors and reviewers for their support of *Chemistry of Materials* over the past year and we look forward to another banner year in 2006.

James V. Crivello
Editor

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(4) The guidelines are available at <http://pubs.acs.org/instruct/ethic.html>.