

Modelling and Simulation in Materials Science and Engineering Newsletter

November 2009

Modelling and Simulation in Materials Science and Engineering (MSMSE) has enjoyed many exciting developments recently, including the publication of four Topical Review articles, a special issue devoted to Microstructure Evolution in Materials and the 2008 Editorial Board Highlights, as well as achieving an impressive increase in impact factor to 1.388.

Special Issues

Our latest special issue is entitled 'Microstructure Evolution in Materials' and was published in the September 2009 issue. The Guest Editors were Anter El-Azab, Daniel Weygand and Jeff Simmons. This special issue consists of papers derived primarily from presentations at the Symposium on Multiscale Modeling of Microstructure Evolution in Materials, part of the Fourth International Conference on Multiscale Modeling of Materials (MMM-2008), which was held 27–31 October 2008 at Florida State University. A subset of these papers was invited especially for this special issue. These articles are free to read until March 2010.

Future plans include a focus issue on 'Challenges for first principles based properties of defects in semiconductors and oxides', which is scheduled to be published in December (Guest Editor Dr Peter Schultz, Sandia). We also plan to publish a focus issue on tribology early next year. We always welcome new ideas for special issues, so if you have a suggestion for a particular area of focus please contact us at msmse@iop.org.

Topical Review Articles

We have published four Topical Reviews in 2009, including:

- Phase-field models in materials science
I Steinbach
- A unified framework and performance benchmark of fourteen multiscale atomistic/continuum coupling methods
R E Miller and E B Tadmor

Our review articles are commissioned papers in fields of strong interest, giving a solid overview of the current state of research. All of our review articles are available to read on the review articles webpage.

Increased Impact Factor

We are pleased to report that the impact factor of MSMSE has increased by 20% to 1.388, as published in the 2008 Journal Citation Reports®. For further reasons to publish with us, please visit our author benefits webpage.

Editorial Board Highlights

The 2008 highlights have been selected and are freely available to read until the end of this year. These articles were selected to represent the diversity of the journal, some containing outstanding research and breakthroughs, some with especially clear exposition and beautiful presentation, and others that are instructive, with tools useful to many readers. We hope that you enjoy these articles, whether reading them for the first time or with renewed interest.

Featured Articles

I am pleased to bring to your attention the following new featured articles, which have been made freely available via the journal's website:

- Aspects of simulating the dynamic compaction of a granular ceramic
John P Borg and Tracy J Vogler
- Defect evolution and pore collapse in crystalline energetic materials
Nathan R Barton, Nicholas W Winter and John E Reaugh



Open-Access Conference Proceedings

Journal of Physics: Conference Series has published several materials science related conference proceedings, which are available for free online:

- APCTP–ASEAN Workshop on Advanced Materials Science and Nanotechnology (AMSN08)
- Symposia D, E and F from MRS International Materials Research Conference (IMRC-2008)
- The 13th International Conference on Rapidly Quenched and Metastable Materials

We are also delighted to announce the launch of the open-access proceedings service *IOP Conference Series: Materials Science and Engineering* which has already published 5 volumes this year, with many more due to be published in 2010.

Other freely available conference proceedings which may be of interest can be found here.

If you would like more information about MSMSE then I would be very happy to hear from you.

Best wishes,
Lara Finan
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