Foreword

Solid-Solid Phase Transformations in Inorganic Materials, PTM 2015

The International Conference on Solid-Solid Phase Transformations in Inorganic Materials, PTM 2015, was held at the Westin Whistler Resort & Spa in Whistler, British Columbia, Canada, from June 28 to July 3, 2015. The Minerals, Metals and Materials Society (TMS) co-sponsored PTM 2015 that followed in the tradition of the PTM conference series to provide an important forum for presentation and in-depth discussion of recent advances made in the field of solid-solid phase transformations. Every effort was made to adhere to the high standards of the PTM conferences previously held in Pittsburgh (USA, 1981), Cambridge (UK, 1987), Farmington (USA, 1994), Kyoto (Japan, 1999), Phoenix (USA, 2005), and Avignon (France, 2010).

Overall, more than 370 delegates from 27 countries attended PTM 2015. The technical program of PTM 2015 followed the approach of PTM 2010 with invited and contributed presentations in six thematic sessions:

- (i) diffusional transformations
- (ii) displacive transformations
- (iii) advances in modeling and simulations
- (iv) advances in experimental techniques
- (v) emerging areas
- (vi) industrial applications.

An important feature of PTM 2015 was the Hillert-Cahn lectureship that was awarded to Peter Voorhees, the Frank C. Engelhart Professor of Materials Science and Engineering at Northwestern University, and Professor of Engineering Sciences and Applied Mathematics. This award was introduced in 2010, in order to recognize the outstanding contributions of John Cahn and Mats Hillert to the science of phase transformations in solid materials. It is awarded to a leading practitioner of the discipline at each PTM conference. Further, PTM 2015 introduced the Aaronson Award, an award to be given at every PTM conference to an outstanding graduate student or young researcher in recognition of his/her exceptional contribution to the physical metallurgy of phase transformations. Hao Chen, who is now an Assistant Professor at Tsinghua University, was selected as the first Aaronson awardee. During PTM 2015, nine plenary sessions were held including the Hillert-Cahn lecture and the Aaronson competition session with five finalists. In addition, 270 oral presentations including 68 invited papers were given in 60 topic-specific sessions and the poster session with more than 80 contributions was dedicated to the late Jack Kirkaldy.

Invited and plenary speakers as well as authors of outstanding presentations were invited to submit articles to *Metallurgical and Materials Transactions*. The resulting collection of ten papers provides an overview of the depth and breadth of PTM 2015 starting with the contribution of the Hillert-Cahn lecturer, Peter Voorhees, followed by the article of the Aaronson awardee, Hao Chen.

Finally, China was selected as the host of the next PTM conference to be held in 2020 (PTM 2020). It is of note that four countries had made proposals for PTM 2020, further confirming the continued interest and significance of solid-solid phase transformation research as a key discipline in materials science and engineering.

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