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# Editorial

The thermodynamics family about which I reported in my previous Editorials in 1992, 1994, 1996, 1998, and 2002 had a meeting in Kraków, Poland, May 30 to June 4, 2004, when the XXXIII Calphad congress was held. This congress was organized by the Aleksander Krupkowski Institute of Metallurgy and Materials Science (I was acting as a chairman) in cooperation with the Jagiellonian University and AGH University of Science and Technology. Aleksander Krupkowski was an eminent scientist who was active in the development of the thermodynamics theory of metallurgical processes. In May 2004 we celebrated the 110th anniversary of his birth.

This year's Calphad will be noted in the history of these conferences for being held for the first time in a former Central European country, one which has now become part of United Europe. Pope John Paul II's blessing was bestowed upon the participants on the opening day of the congress. Himo Ansara, now departed, was one of the founding fathers of the Calphad conferences. During the 2004 Calphad conference Himo's wife, Aljette Ansara, was with us and her presence somehow compensated for Himo's absence.

This congress was a joint meeting of the Calphad group and the Thermodynamics of Alloys group. The first Calphad was organized in 1971 and the first Thermodynamics of Alloys in 1972 in Münster, Germany. Since that time, the annual Calphad and the biennial Thermodynamics of Alloys conferences have become forums for presentations and discussions of the results of experimental studies and modeling primarily oriented toward thermodynamics of alloys and phase diagram calculations. Additionally, both congresses enable the meeting of friends and usually a ladies' program is arranged. We paid special care to proper organization and presentation of this year's Calphad in Kraków, and the attractions of the conference city and surroundings were also shown during Calphad XXXII in Canada in 2003. One hundred and forty-eight participants from all over the world took part, plus 16 accompanying persons. One hundred and sixty-two technical papers (including plenary, invited, regular presentations, posters, and software demonstrations) were presented. We were able to offer financial assistance to several participants at this year's Calphad. These were members of the Associated Phase Diagram and Thermodynamics group, which was formed in 2002 and which consists of representatives from countries of the Central European area, which are not individually represented in the Alloy Phase Diagram International Commission (APDIC).

Participants in the Calphad congress were given the choice of publishing their presentations in the *Calphad* journal or in *Archives of Metallurgy and Materials.* The special issue 3/2004 of the latter journal sponsored by the Institute of Scientific Information is now in print and will contain more details about the presentations. Suffice to say that there is a slight but observable increase in the number of experimental studies directed not only toward support of phase diagram calculations, but also toward verification by the first principle calculations. This is very important because, as noted by P. Nash from the Illinois Institute of Technology (*J. Phase Equilibria,* Vol 24, 2003, p 418), "there are so few centers in the United States that a critical mass barely exists to ensure continued competence in the measurement of thermodynamic data in the future." During the recent Gordon Conference, "High Temperature Materials, Processes & Diagnostics" (August 1-6, 2004, Colby College, Waterville, ME), I was privileged to discuss this problem with Professor Kleppa, who for many years was one of the top calorimetrists and whose apparatus was dominantly of his own construction. Our reminiscence included our first meeting with the eminent experimentalist, Ulvik Hardanger, in 1967 in Norway during a conference on molten salt thermodynamics at the Institute of Inorganic Chemistry in Trondheim. Since 1967, enormous political changes have occurred, especially in Europe. Poland's contribution to these changes has been very important.

This year, in September, in Vienna at the Thermodynamics of Alloys Conference, another important event in the history of the "thermodynamics family" is planned. Gradually, old roots of this "family" are being replaced by younger researchers. Our role is still to remind these new adepts of the importance of experiment, not only for modeling but also for creating various data bases.

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