



It has been more than a year since the *Journal of Phase Equilibria and Diffusion*, JPED, changed its name and amplified its scope to include diffusion and related phenomena. The purpose was to be up-to-date with the general move of the research on phase diagrams and, therefore, to include applications-related problems from the thermodynamic and the kinetic (diffusion) viewpoints. So, we may process the last seven (blue) issues to gain some insights on the profile of researchers that submit papers to the JPED and to think a little bit about the future.

The published articles were grouped according to their major themes: experimental (phase diagram or thermodynamic), assessment and modeling, applied research, diffusion, and reviews. Articles that clearly belong to two different groups were considered to add half for each group. There were 38 published articles in the major section of those seven issues. The short phase diagram reviews were not included.

About 38.2% of the articles are related to assessment and modeling while 35.5% reported experimental data: phase diagram (23.7%) and thermodynamic data (11.8%). This shows a good balance between these two areas; however, most experimental data are in the form of phase diagrams determination. Applied research contributed with 9.2% and diffusion only with 6.6%. Four general reviews on phase diagram and thermodynamic were responsible for 10.5% of the papers.

These numbers show that most of the papers (84.2%) are still related to phase diagrams. Further, there are a larger number of articles reporting assessments than those reporting measurements of thermodynamic properties. This may be considered a warning to the research community since it is not possible to do good assessments without good experimental data. First principles modeling might fill some gaps on the experimental data, but even considering this, there will be a need for experimental data related to the increased number of compounds that become of interest each year.

An attempt was made to extend this comparison to a larger number of journals using a bibliographic database, but the results were inconclusive due to the large number of different words used to describe thermodynamic and phase diagram research.

Even though the present statistics have a limited scope, it shows a trend that should be overcome if we want to improve the application of thermodynamics and phase diagrams to solve modern materials problems. There must be an increase in the publication of experimental data, in particular, the thermodynamic data.

R.R. de Avillez
Associate Editor
Journal of Phase Equilibria and Diffusion