EDITORIAL

This issue of *Powder Diffraction* (*PDJ*) contains three Technical Articles, six New Diffraction Data papers, an International Report summarizing the virtual Denver X-ray Conference, and the reports on upcoming Meetings, Short Courses, and Workshops. The latter are particularly relevant given the frequently changing plans for meetings, short courses, and workshops due to COVID-19.

The three Technical Article papers are each special in their own regard. The first two Technical Articles are outstanding studies of the crystal structures of a pharmaceutical and an inorganic "Laves" C15 phase along with its magnetic properties. The third Technical Article, "Continuous Series of Symmetric Peak Profile Functions Determined by Standard Deviation and Kurtosis" by Dr. Takashi Ida, is of particular interest to me due to my prior profile modeling work and the development of standard reference materials (several decades ago) on computer modeling of PXRD profile shapes and addressing the shift in position and shape of diffraction profiles due to instrumental aberrations. Ida's paper summarizes how applying these techniques can reduce the peak shift due to convolution of the peak profile with instrumental aberrations and thus should lead to improved accuracy in the measurement of peak positions and, consequently, the derived cell parameters. Potentially the structure parameters determined by Rietveld methods will also be improved. Dr. Ida, as I encourage other authors of analytical method papers, deposited the software codes he developed for this method. These software depositions should greatly help readers in exploring this method.

The six New Diffraction Data papers cover a wide range of materials being characterized by diffraction methods. These New Diffraction Data papers providing optimized crystal structure data and observed powder diffraction data for several pharmaceuticals, organic, and inorganic phases. Each are being deposited with ICDD for inclusion in the Powder Diffraction File. Such studies are particularly valuable in numerous ways as they add to the literature and databases used for phase identification and the crystal structure databases which are particularly valuable for modeling and comparative studies of isostructural and distorted structural phases.

This issue also contains an International Report, the "70th Annual Denver X-ray Conference Report – A virtual Event" by Stephanie Jennings. It summarizes the successful Denver X-ray Conference held virtually August 02–06, 2021. The presentations were available to registered attendees online for nearly 2 months following the conference. The International Report provides an excellent summary of the meeting, exhibitors, invited talks, contributed talks, poster sessions, and provided means for virtual social activities. I was able to attend virtually and found it an excellent experience. My personal impressions were that the virtual meeting approach is beneficial in many ways. Aspects include the ability to attend while remaining at home base, the ability to "attend" a presentation at a more convenient time for the viewer, and even to view (or review) a given presentation after the conference week is past. Yet I've not yet gotten comfortable with the virtual "face-to-face" conversation options. While attending pre-COVID-19 conferences, I always found the "in the hall" discussions of unique value. On the positive side, there were useful ways to have virtual collaborations, explore exhibitor displays, and participate in other ways. Given the challenges of the COVID-19 pandemic, the evolution tools to enable "virtual conferences" seem to provide an excellent alternative. The virtual tools have many benefits. In summary, my personal experience was that this year's DXC was indeed very well laid out, operationally excellent, and most importantly that many excellent presentations were given. For a good summary, please read the International Report. Also, if you registered, look forward to the digital form of the Denver X-ray Conference proceedings. Most importantly, do make a commitment to join the 2022 DXC conference in whatever format is offered.

As I wrote in the prior Editorial one "benefit" to going virtual, frequently pointed out by many other conference organizing groups, has been the greater international participation in the virtual meetings. I still expect that improved technological solutions will evolve that address the challenges and virtual collaboration needs. Today I find, as I expect many of our *PDJ* readers do, that nearly every society I follow is holding workshops, conferences, and educational seminars virtually. Projecting the future is challenging, but I believe that even as vaccination rates continue to increase and even if (hopefully) there are no new COVID-19 variants that sidestep the vaccinations, nearly all conferences on materials, characterization methods, instrumentation, and educational workshops will adapt to a hybrid setting where some attendees will attend in person, but that a significant number will attend virtually.

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 0885-7156/2021/36(4)/221/1/$18.00
https://doi.org/10.1017/S0885715621000592 Published online by Cambridge University Press