

## 100 Years Since Albert W. Hull's Contributions to Powder Diffraction

With this first Issue of *Powder Diffraction* in 2017 it is worthwhile to reflect on the 100 years of evolution of the powder diffraction method and its origins. While the Braggs and others were developing single crystal diffraction methods some samples of major interest were not available as single crystals. To address this, the powder diffraction method was founded via the contributions by Paul Scherrer and Peter Debye and lesser known, but equally important, by Albert W. Hull of General Electric Research Laboratories.

The contributions of Scherrer and Debye are well documented in textbooks and journals, and the Debye–Scherrer camera they designed has been widely used. Indeed, the geometry is still used today including at state-of-the-art synchrotron X-ray facilities. The contributions of Hull presented in 1916 and published in two papers in *Physical Review* in 1917 were similarly critical in establishing the powder diffraction method and solving crystal structures when single crystals

were unavailable due to size, twinning, deformation, or difficulty to grow. Hull followed these contributions in 1919 with a paper “*A new method of chemical analysis*” essentially outlining how powder diffraction data could serve as a fingerprint of a chemical species and how powder diffraction could be used to analyze mixtures of powders.

I invite you to read in this Issue the very thorough and interesting Review Article “*The contributions of Albert W. Hull to X-ray powder diffraction at one hundred years of his landmark publication*” by Professor J. M. Delgado. I am sure you will be fascinated to read about Hull's contributions in establishing the foundations to the analytical method we call powder diffraction.

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