Debye-Rietveld Year Jubilee

Peter Debye Hugo Rietveld

This year, 2016, marks the 100-year centennial of Peter Debye's groundbreaking powder diffraction experiments and the 50-year anniversary of Hugo Rietveld's method for determining 3D crystal structure from powder diffraction patterns. Debye's inventions are the ancestors of XRD instruments and "Rietveld refinement" is integral to many analytical software packages.

One hundred years ago, Peter Debye, together with Paul Scherrer, performed the first powder diffraction experiment. Instead of a large single crystal, their sample was made up of a large number of randomly oriented crystalline grains that scattered X-rays in all directions. Their experiments established the Debye-Scherrer geometry for quantitative intensity measurements. Then, fifty years later, Hugo Rietveld introduced "Rietveld refinement", a computational procedure for powder diffraction data that provides quantitative information about phases, strain and defects in a wide range of materials.

Organized by the Dutch Crystallography Society (NVK), the Debye-Rietveld celebration will be held on Thursday, September 22, 2016 in Amsterdam, The Netherlands. It will begin with a day-long symposium comprising talks about the past, present and future applications of powder diffraction analysis. Hugo Rietveld himself will give the keynote presentation. The celebration will continue into the evening with a boat cruise through Amsterdam's canal district, and dinner along the IJ river. Put your party hat on and join the jubilee!