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Diffuse scattering and its analysis

The diffraction patterns of disordered crystalline materials contain a diffuse component in addition to the well-studied Bragg reflections. This talk will attempt to survey the many different approaches to interpreting this diffuse scattering so as to obtain insight into the particular type of disorder present. It will cover a range of different diffuse scattering measurements: single-crystal and powder; X-ray and neutron; and magnetic and nuclear. In the same spirit, it will cover a large variety of different analysis approaches, based on real-, reciprocal-, and interaction-space interpretations.

Andrew Goodwin is Professor of Materials Chemistry and a Research Professor at the University of Oxford. Born in Australia, Andrew studied at Sydney and Cambridge before joining the Oxford Faculty in 2009. His team's research has been recognised by a number of key awards, including the Harrison-Meldola, Marlow, Corday-Morgan, and Peter Day prizes of the Royal Society of Chemistry. He was the inaugural UK Blavatnik laureate in Chemistry, and currently holds an Advanced Grant of the European Research Council.