

PHYSICAL PROPERTY SHEETS IN THE PDF-4+ 2020 DATABASE

V. Bosnic, S. Gates-Rector and T. Blanton

International Centre for Diffraction Data, Newtown Square, PA

The International Centre for Diffraction Data Powder Diffraction File™ (PDF®) is the world's largest collection of diffraction data for phase identification. By itself, the diffraction data are a powerful tool for characterization of materials. To enhance the capability of the ICDD databases, physical property sheets are added to PDF® entries allowing the analyst to probe further into understanding the behavior and functionality of materials. As a result, of contributions from ICDD members and external consultants, 5,435 entries in the PDF® possess physical property sheets. These documents cover the areas of battery materials, hydrogen-storage materials, ionic conductors, nano materials, polymers, semiconductors, solar materials, thermal expansion properties of perovskite materials for fuel cells, and thermoelectric materials. A summary of the activities pertaining to the collection & generation of these physical property sheets at ICDD will be presented.