

# Determination of crystallite size and strain: a comparison of different x-ray diffraction techniques

Jiawanjun Shi, Aya Takase

Rigaku Americas Corporations, 9009 New Trails Drive, The Woodlands, TX, 77381

Different methods for the determination of crystallite size and strain from x-ray diffraction data were evaluated and discussed. Three different kinds of materials were examined by x-ray diffraction, SAXS and Raman spectroscopy for comparison. The purposes of the crystallite size and strain studies given in this paper are to compare advantages and disadvantages of the Scherrer equation, the Halder-Wagner equation/Hall equation and the fundamental parameter method using PDXL software.