PVA and PVA doped for different concentrations of CdCl2 conducting polymer composites films were prepared by solution casting technique. Synthesized polymer composite films were analysed using line profile analysis employing X-ray diffraction (XRD) data. Crystallite size for different concentrations of CdCl2 are computed here using Whole Powder Pattern Fitting (WPPF) technique, an in-house program developed by us. The structural parameters of these polymer composites is computed using functional data analysis (FDA). In order to estimate the mean functional relationship between a parameter and the dopant concentration, FDA is used.


Keywords: XRD, WPPF, Functional Data Analysis