Structural Parameters in PVA:CdCl2 Using Functional Data Analysis

Nandaprakash M B1, Somashekar R1
1Centre For Materials Science, University Of Mysore, Mysuru, India
E-mail: nandaprakash_mb@rediffmail.com

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