Poster Presentation

MS040.P06

Structural Parameters in PVA:$CdCl_2$ Using Functional Data Analysis

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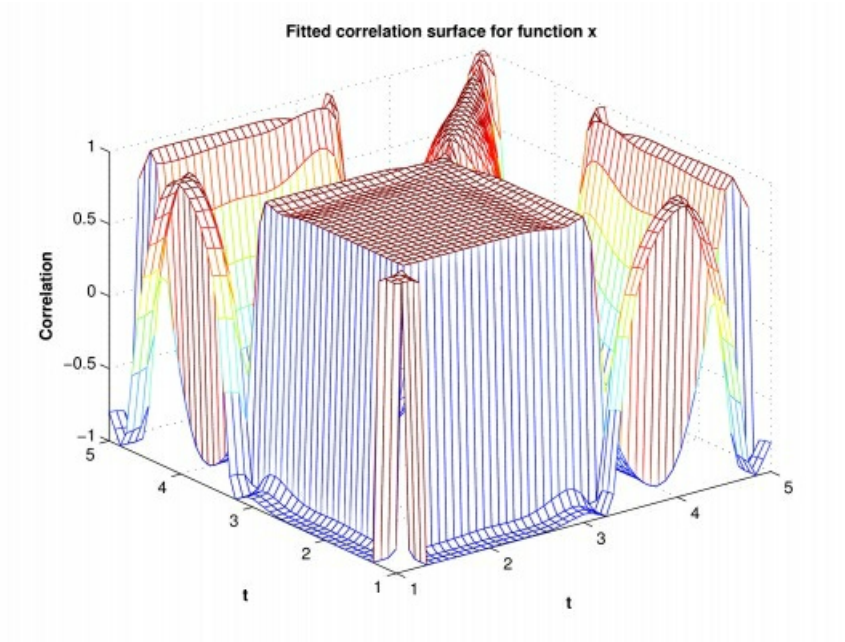
PVA and PVA doped for different concentrations of CdCl2 conducting polymer composites films were prepared by solution casting technique. Synthesized polymer composite films were analysed using line profile analysis employing X-ray diffraction (XRD) data. Crystallite size for different concentrations 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.

[1] S. K. Tripathi, Ashish gupta and Manju kumara, (2012), Bulletin of Materials Science, 35(6), 969–975.
[2] Urs, T. G. K., Bharath, K., Yallappa, S., & Rudrappa, S. (2016). Functional data analysis techniques for the study of structural parameters in polymer composites. Journal of Applied Crystallography, 49(2).



Keywords: XRD, WPPF, Functional Data Analysis