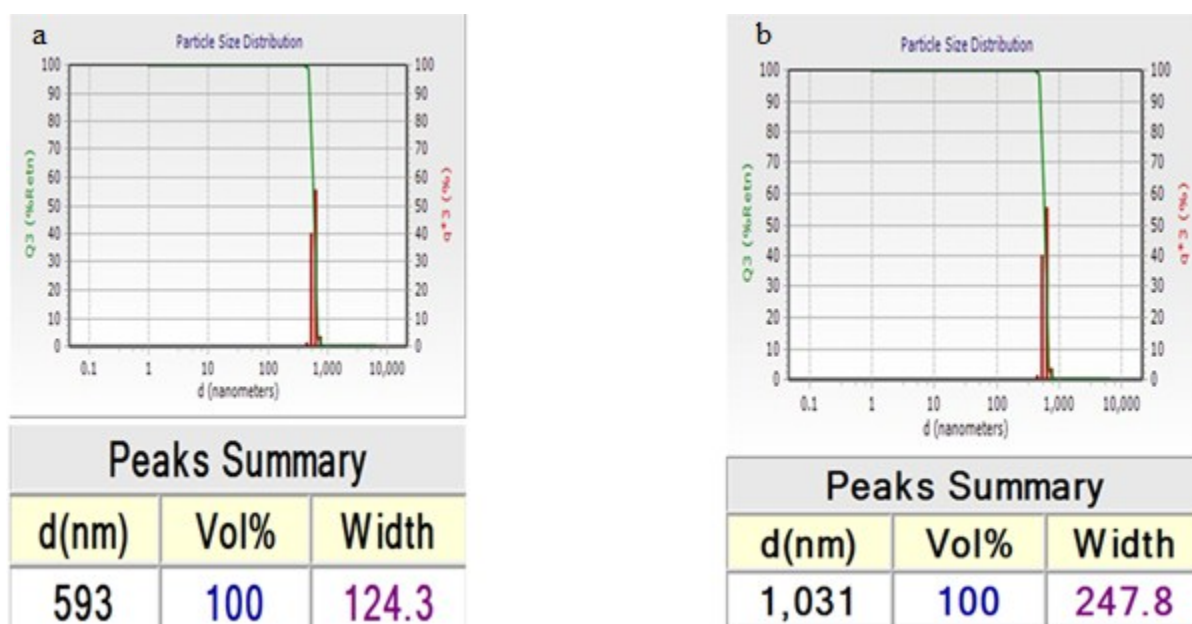
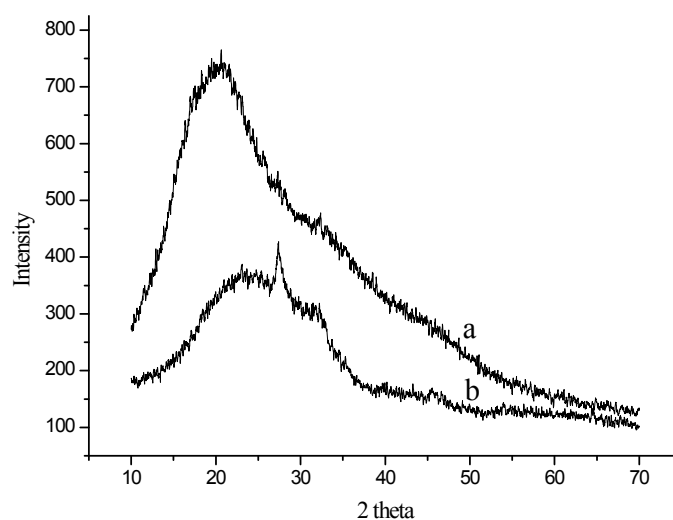


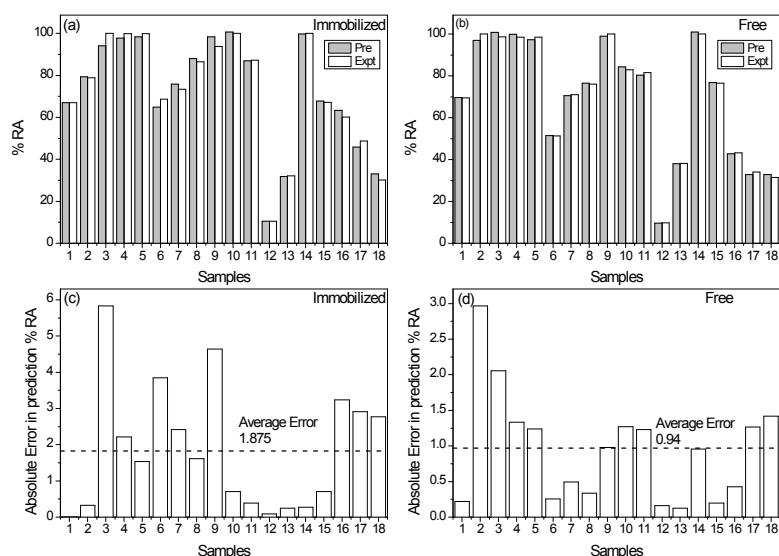
445 Supplementary materials



447 **Fig. S1: Particle size of pristine cellulase (a) and CCAs (b)**



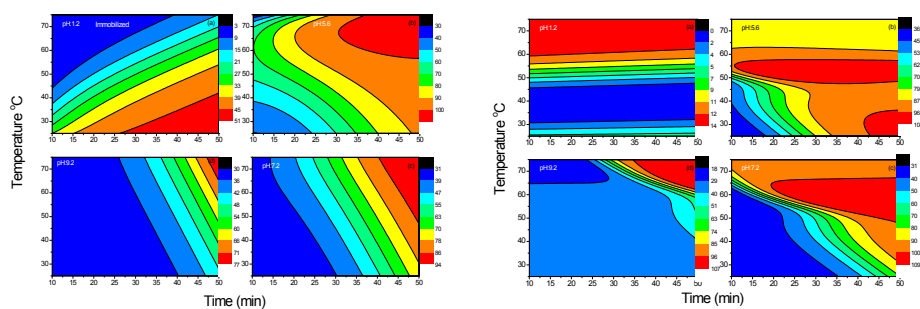
450 **Fig. S2: XRD spectra of pristine cellulase (a) and CCAs (b)**



451

452 **Fig. S3: Statistical estimation of %relative activity as a function of time, temperature**
 453 **and pH using the experimental parametric framework by artificial neural network**
 454 **(ANN) model (total available experimental data sets were 18. The average %error was**
 455 **found to be 1.875 and 0.94 for the CCAs and the pristine cellulase respectively).**

456



457

458 **Fig. S4: Processing window for optimum % relative activity with the variation of**
 459 **time and temperature at different pH (at pH 5.6, the highest %relative activity can**
 460 **be obtained over a wide range of time and temperature).**