Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Water adsorption and desorption from crystalline P(VDF-TrFE) copolymers JIE XIAO, University of Nebraska-Lincoln, LUIS ROSA, PETER JACOBSON, PETER DOWBEN — Water adsorption and absorption on crystalline poly(vinylidene fluoride – trifluoroethylene), was examined by thermal desorption spectroscopy. Two distinctly different water adsorption sites are identified: one adsorbed species that resembles ice and another species that interacts more strongly with the polymer thin film. The existence of the latter species is consistent with X-ray diffraction studies of water absorbed into the bulk of copolymers of poly(vinylidene fluoride – trifluoroethylene) crystalline thin films. There are strong steric effects observed in the angle-resolved thermal desorption that may be a result of the large polymer thin film surface dipoles.

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Date submitted: 24 Nov 2004 Electronic form version 1.4