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Activated Desorption of Water from a Polymer Surface CAROLINA C. ILIE, P.A. JACOBSON, University of Nebraska at Lincoln, I.N. YAKOVKIN, Institute of Physics of National Academy of Science of Ukraine, Kiev, Ukraine, L.G. ROSA, MATT POULSEN, D. SAHADEVA REDDY, J.M. TAKACS, S. DUCHARME, PETER A. DOWBEN, Physics and Astronomy, University of Nebraska at Lincoln, Lincoln, NE — We studied water adsorption and desorption on the dipole ordered polymer poly(methylvinylidene cyanide) PMVC. The polymer has a distinct bulk absorbed water phase. The absorption of water is believed to distort the polymer chain placement. The kinetic parameters are obtained from thermal desorption spectra. Arrhenius plots yield the activation energy and the order of desorption process is determined from the best linear fit in the Arrhenius plots. Unusual angular dependence in thermal desorption is also observed.

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