dielectric properties, magnetic properties

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Dielectric Study on Ionic Orientational Disorder in the Low-Temperature Phases of Ionic Plastic Crystal KNO_2. — The complex dielectric permittivity of the title compound is measured in the frequency range 20–10^6 Hz and the temperature range 22–300 K. A small step-like anomaly of the static dielectric permittivity appears at the rhombohedral (phase II) to monoclinic (phase III) transition (T = 264.1 K). In phase III the static dielectric permittivity decreases gradually on cooling over a wide temp. range 50–264 K. This indicates that the orientation of the NO^-_2 ion is still disordered at high temperatures in phase III and becomes ordered gradually with decreasing temperature. A 180 °-flip motion model is proposed. — (HONDA, H.; ONODA-YAMAMURO, N.; ISHIMARU, S.; IKEDA, R.; YAMAMURO, O.; MATSUO, T.; Ber. Bunsen-Ges. 102 (1998) 2, 148-151; Dep. Chem., Univ. Tsukuba, Tsukuba, Ibaraki 305, Japan; EN)