The binary phase diagram of sodium nitrite and sodium nitrate is currently not well-understood because four earlier detns. of this binary system resulted in considerably different conclusions. Two works classify the system as eutectic and two as a continuous solid soln. type, together with different sub-solidus curves. New Raman measurements and differential scanning calorimetry data on solidified mixts. of different comps. have provided support for a simple eutectic diagram with a solidus at 230 oC ranging from 0.25 to 0.80 in mole fraction of sodium nitrate. A sub-solidus transition was detected close to 183 oC and a second one close to 160 oC. The latter was considered to be related to the nitrite component and probably arose from the ferroelec. to antiferroelec. or paraelec. transition of sodium nitrite. The change of slope of the maxima of some Raman lines with temp. also gave support to these transitions.
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