

# Ionic Dynamics in $\text{LiNO}_2$ Studied by $^7\text{Li}$ and $^{15}\text{N}$ Solid NMR

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The temperature dependences of  $^7\text{Li}$  and  $^{15}\text{N}$  NMR spin-lattice relaxation times and spectra in  $\text{LiNO}_2$  were measured in the range 120 K - 473 K (m.p.). The  $180^\circ$ -flip motion of  $\text{NO}_2^-$  ions along or perpendicular to the molecular  $C_2$ -axis and the self-diffusion of  $\text{Li}^+$  ions (activation energies of 42 - 44 and 100  $\text{kJ mol}^{-1}$ , respectively) were observed in this range. From the comparison of the observed activation parameters with those reported for plastic phases of alkali metal nitrites, a new characteristic of the plastic crystal was obtained.

*Key words:*  $^7\text{Li}$  and  $^{15}\text{N}$  Solid  $\text{LiNO}_2$  NMR; Chemical Shift Anisotropy