# Structure and Dynamics of $Li_3InBr_6$ and $NaInBr_4$ by Means of Nuclear Magnetic Resonance*

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Z. Naturforsch. **53a,** 466–472 (1998); received January 26, 1998

$Li_3InBr_6$ and $NaInBr_4$ have been synthesized and characterized by means of DTA, $^{81}Br$ NQR, $^6Li$, $^7Li$, $^{23}Na$, and $^{115}In$ NMR, and AC conductivity. These measurements revealed the presence of phase transitions and cationic diffusion in both compounds. From the spin-lattice relaxation times of $^{81}$ Br NQR and the peak widths of $^7Li$ and $^{23}Na$ NMR spectra, it is deduced that the conduction is due to cationic diffusion. The activity energy for the $Li^+$ diffusion was found to be 24 kJ/mol for $Li_3InBr_6$.

*Key words:* NQR; NMR; Spin-lattice Relaxation Time; AC Conductivity; Cation Diffusion.

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