An NMR Spin-Echo Study of Diffusion in a Room-Temperature Molten Salt

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Pressure-dependent measurements of self-diffusion in the room-temperature molten salt (RTMS) N,N-butylmethylimidazoliumhexafluorophosphate were carried out at 298 and 308 K. The pressure range lied between ambient pressure and 300 MPa. In addition, methanolic solutions of this RTMS were investigated at ambient pressure. The self-diffusion coefficients of both components are reported as functions of concentration and temperature in the range 293 – 313 K. A modified version of a recently published high-pressure probe is described.

Key words: Room-temperature Molten Salts; Self-diffusion; NMR Spin Echo.