Lattice models for salt solutions have attracted and continue to attract interest [1]. Ions in a salt solution are regarded as occupying lattice sites, the lattice parameter increasing as a solution is diluted; solvent molecules occupy the interstices of the lattice. This model for salt solutions generates interest because the distribution of ions about a central reference j-ion is therefore known. This theory requires that \( \ln \gamma_\pm \) is a linear function of \( \left( m_i / m^0 \right)^{1/3} \) for salt-i; the cube-root law. This dependence is observed for reasonably concentrated salt solutions [2]. Unfortunately convincing evidence for lattice structures is not forthcoming. For example, the electrical conductivities of salt solutions cannot be understood in terms of lattice structures.

Footnotes

[1]  