# New Data Compilations

**NBS Monograph 70. Microwave Spectral Tables. Vol. IV. Polyatomic Molecules Without Internal Rotation.** MARIAN S. CORD, JEAN D. PETERSEN, MATTHEW S. LOJKO, AND RUDOLPH H. HAAS. Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402—Price $5.50.

Measured frequencies, assigned molecular species, and assigned quantum numbers are given for about 14,000 spectral lines of polyatomic molecules without internal rotation observed by coherent radiation techniques. Molecular data, such as rotational constants, dipole moments, and various coupling constants, determined by such techniques, are also tabulated. References are given for all included data.

**NSRDS-NBS-15. Molten Salts: Vol. 1, Electrical Conductance, Density, and Viscosity Data.** G. J. JANZ, F. W. DAMPIER, G. R. LAKSHMINARAYANAN, P. K. LORENZ, AND R. P. T. TOMKINS. Superintendent of Documents, U. S. Government Printing Office, Washington, D.C. 20402—Price $3.00.

Data on the electrical conductance, density, and viscosity of single-salt melts were compiled from a comprehensive search of the literature up to December 1966 and a critical assessment made of the compiled data. Recommended values were determined and are presented as functions of temperature in the form of equations and tables.

The results for some 174 compounds as single-salt melts are reported: no attempt was made in the present effort to embrace the results for molten salt mixtures. Data are presented for fluorides, chlorides, bromides, iodides, carbonates, nitrites, nitrates, oxides, sulfides, sulfates, and a miscellaneous group.

**NSRDS-NBS-24. Theoretical Mean Activity Coefficients of Strong Electrolytes in Aqueous Solutions from 0 to 100° C.** WALTER J. HAMER. Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402—Price $4.25.

In determining the activity coefficients of electrolytes in aqueous solutions from the freezing point to the boiling point of the solvent, various equations have been used in the treatment of the data. This paper gives values for activity coefficients of electrolytes of various valence types from 0 to 100° C., and for ionic strengths from zero to 0.1 molal or 0.1 molar, as calculated by seven different equations based on the theory of interionic attraction. These equations are those of Debye and Hückel, Güntelberg, Davies, Scatchard, and Bjerrum, and what may be termed an extended Güntelberg equation and an extended Scatchard equation.

These documents have been reviewed by the Editorial Board of the National Bureau of Standards.