

GENEALOGY DATABASE ENTRY

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Kirkwood, John Gamble

1907 - 1959

DEGREE: PhD

DATE: 1929

PLACE: MIT

TEACHER/RESEARCH ADVISOR: Keyes

studied the physical chemistry of solutions with applications to proteins and other macromolecules, the nature of intermolecular forces, and the relationship between quantum and classical statistics; developed a molecular-distribution-function approach to the equilibrium theory of simple fluids, in which he correlated the thermodynamic properties of matter with the potential of intermolecular force by utilizing statistical mechanics; initiated theoretical studies of dielectric behavior, irreversible processes in solutions of macromolecules, electrolytic and nonelectrolytic solutions, cooperative phenomena, shock and detonation waves, and optical rotation; developed and applied a new method of protein fractionation by differential electrophoresis across a narrow cell combined with convection; investigated the statistical-mechanical theory of transport processes.

1. *American Chemists and Chemical Engineers*; Miles, W. D., Ed.; American Chemical Society: 1976; p276-277.
2. *Dictionary of Scientific Biography*; Charles Scribner's Sons: 1970-1990; vol. 7, p387.
3. *J. Chem. Phys.* **1960**, 33, 1279-1281.
4. *Chem. Eng. News* **1950**, 28, 1822-1823.
5. *Chem. Eng. News* **1953**, 31, 4900.
6. *John Gamble Kirkwood Collected Works*; pub? : 1965-1968.