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co-efficient* of the E.M.F. of cells, electrical conduction and electrolysis†, in mixed salt solutions, the phenomena of galvanic polarization‡, and the common experiments§ grouped by Ostwald under the title of "Chemical Action at a Distance," have been, and are at present, subjected to a searching and successful investigation by the aid of this modern scientific instrument, the product of a fortunate combination of wide-reaching experimental generalizations with the rigid laws of Energetics—of the genius of Faraday with that of Clausius.

I desire to take this opportunity of expressing my thanks to Dr. W. L. Miller and Mr. T. R. Rosebrugh for much valuable assistance in writing this paper.

^{*}For many cases this may be determined by the differentiating formulæ for π given in this paper; for example, equation (15b).

⁺W. Hittorff. Pogg Ann., ciii., 45, 1858 (Electrolysis of mixture of K Cl and KI). H. Freudenberg, Neues Prinzip der Elektrischen Trennung von Metallen: Ber. d. deutsch. Chem. Ges., 1892, 2492.

[‡]M. Le Blanc. Die Elektromotorischen Krafte der Polarization, Z. Ph. Ch., VIII, 299, 1891.

[§] W. Ostwald. Chemische Fernewirkung, Z. Ph. Ch., VIII., 541, 1892.