

1934

## A Mechanical Method for the Analysis of Complex Spectra

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### Recommended Citation

Atanasoff, J. V. and Brandt, A. E. (1934) "A Mechanical Method for the Analysis of Complex Spectra," *Proceedings of the Iowa Academy of Science*, 41(1), 252-252.

Available at: <https://scholarworks.uni.edu/pias/vol41/iss1/82>

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A MECHANICAL METHOD FOR THE ANALYSIS  
OF COMPLEX SPECTRA

J. V. ATANASOFF AND A. E. BRANDT

This paper discusses the application of the punched card equipment, now commonly used in statistical and actuarial work, to the analysis of complex spectra into terms. The spectral frequencies are punched on one set of cards and as complements on another. These cards are then passed in pairs through the tabulator which is provided with a summary punch. The cards from the summary punch are sorted and tabulated. The common differences as well as a code number indicating the lines giving rise to these common differences may be easily read from the tabulation sheet. With the aid of certain refinements, the method becomes very rapid and requires only routine attention on the part of the operator.

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EFFECT OF ADDITIONS OF CADMIUM ON GROWTH  
OF ZINC CRYSTALS

E. P. T. TYNDALL

Using the Czochralski-Gomperz method and various specimens of zinc containing certainly less than 1 per cent Cd., Schilling<sup>1</sup> encountered mosaic crystals and failed to find the region of successful growth of Hoyem and Tyndall.<sup>2</sup> It has been found, however, that by using zinc containing several tenths of one per cent of Cadmium the mosaics are largely prevented and a region of growth similar to the previous one reappears.

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ELECTRICAL RESISTIVITIES OF ZINC SINGLE AND  
MOSAIC CRYSTALS

W. J. POPPY

Continuation of the work on electrical resistivity of single crystal zinc completely confirms the value of the ratio of principal

<sup>1</sup> Physics 5: 1, 1934.

<sup>2</sup> Phys. Rev. 33: 81, 1929.