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 Some Reflections concerning Valence Variation Atomic Structure: PROFESSOR M. GOMBERG New Concept of Evolution Based upon Resear on the Titanotheres and the Proboscideans: HENRY FAIRFIELD OSBORN Scientific Events: Grants from the Elizabeth Thompson Sci Fund; The United States Pharmacopoeia; Sci Pi Sigma Convention; The American Associa of Physics Teachers; Annual Meeting of American Ornithologists' Union; Meeting at Missouri Botanical Garden in Honor of J Sachs; The Thomas Chrowder Chamberlin Sci Library 	553 A New Mutation in the ches culus): DR. ELMER RON DR. Magic'': DR. C. STUART 557 The American Association Science: ence Mayan Symposia and I gma The National Academy of the Science News the ulius SCIENCE: A Weekly Jc ence ment of Science, edited by	House Mouse (Mus mus- BERTS. "At the Top is GAGER
Scientific Notes and News Discussion: Gardiner on Coral Reefs: PROFESSOR REGINAL DALY. Tree Twist: PROFESSOR ARTHUR D JACOT. Marine Tertiary in Arizona: ELDRE WILSON. The So-called Autoxidation of Cysto PROFESSOR C. A. ELVEHJEM	562 THE SCIE New York City: G Lancaster, Pa. Annual Subscription, \$6.00 SCIENCE is the official o tion for the Advancement o ing membership in the Ass	CNCE PRESS rand Central Terminal Garrison, N. Y. Single Copies, 15 Cts. rgan of the American Associa- f Science. Information regard- sociation may be secured from secretary, in the Smithsonian ngton, D. C.

SOME REFLECTIONS CONCERNING VALENCE VARIATION AND ATOMIC STRUCTURE¹

By Professor M. GOMBERG

UNIVERSITY OF MICHIGAN

PERMIT me, please, to offer a word of explanation concerning the choice of the subject for this evening's talk. Many years ago it fell to my lot to become interested in a striking instance of valence variation, and the solution of that problem rested wholly on experimental laboratory evidence. A number of other similar cases of valence variation have been subsequently encountered by various workers, and their conclusions, also, rested on experimental evidence. Meanwhile, during the last ten years, and especially during these last five years, the theoretical aspect of the entire valence question has received much clarification as a result of certain theories based on the spectroscopic study of the elements. The question is alluring-do the empirical findings, in this branch, of the near past harmonize with the recent theoretical deductions? Obviously, the nature of the reply to this question

¹ Address of the president, the American Chemical Society, Buffalo, N. Y., September, 1931.

will be colored to some extent by the psychology of the questioner, but the correctness of the answer can only be in proportion to the requisite technical training possessed by the inquirer. On that last score, I bespeak your generous indulgence.

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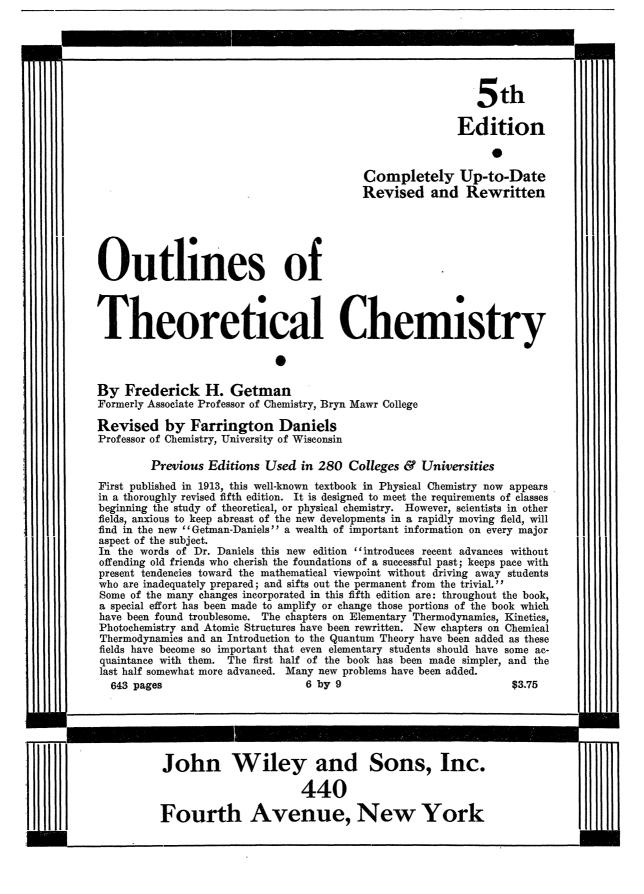
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