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SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

THE SCIENCE PRESS

Lancaster, Pa. Garrison, N. Y. New York City: Grand Central Terminal.

Annual Subscription, \$6.00. Single Copies, 15 Cts. SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

Entered as second-class matter July 18, 1923, at the Post Office at Lancaster, Pa., under the Act of March 8, 1879.

ANCIENT AND MODERN ALCHEMY¹

FIRST of all let me express my high appreciation of the honor of the invitation to come to Cornell as non-resident lecturer for the present term. When I received the friendly letter of Professor Dennis, my first thought was that it would give me the opportunity of staying for some time in the finest laboratory of chemistry now existing in the world, with which I was already acquainted from the description of the building that had been sent to me. It was with great pleasure that I accepted the invitation to join the well-known staff of the department and to avail myself of the privilege of presenting throughout the term some of my researches to a Cornell audience, and to continue my investigations in this building which offers such excellent facilities for experimental work.

It may be a matter of surprise to you that as the subject of my introductory lecture I have chosen alchemy, since that is not generally believed to belong to exact chemistry at all. Only a few decades ago Hermann Kopp, one of the best historians of chemistry, called the history of alchemy "the history of an error." If, however, it was an error, it was one of the most persistent of the false doctrines in the development of any science, and my reason for selecting alchemy as the topic of my address is to be found in the fact that the trend of modern chemistry is toward rather than away from the theories which were condemned by the official science of the last century, of which Kopp may be regarded as the representative.

Alchemy was in disrepute during really only a comparatively short space of time. For many centuries it was highly esteemed as the "sacred science" and no independent science of chemistry existed. It retained its dignity even when chemistry, as distinguished from alchemy, was being developed. It was never entirely abandoned, although, after chemistry had won a much higher position, the disfavor of scientists forced it for a time to hide in the obscurity of private laboratories and secret societies. In recent years it has again emerged into the full daylight of modern scientific theory and research. There is no doubt that much of alchemists' creed was "an error," but their idea that it must be possible to change one chemical element into another, as lead to silver or

¹Introductory public lecture by Professor Fritz Paneth, of the University of Berlin, non-resident lecturer in chemistry at Cornell University.

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