SCIENCE

Vol. LXIV JULY 23, 1926 No. 1647 CONTENTS

The Institute of Chemistry: The Address of the Retiring President: M. L.	
CROSSLEY	73
The Training of Men for the Profession of Chem-	
istry: PROFESSOR TREAT B. JOHNSON	74
Science for Humanity's Sake: Dr. WILLIAM BLUM	77
John Howland: E. A. P.	80
Scientific Events:	
The Australasian Association; Field Work of the	
Victoria Memorial Museum; World Longitude De-	
termination; A School of Microscopy; Programs	
in Engineering and Social Science at the Phila-	
delphia Meeting of the American Association	83
Scientific Notes and News	87
University and Educational Notes	89
Discussion:	00
The Reversal of the Hydrogen Series in the Ex-	
treme Ultra-violet: Professor Theodore Lyman.	
The Cleaving of Ciliates by Amoeba: DR. C. DALE	
BEERS. Danger to the Crater Lake National Park:	
DR. WILLARD G. VAN NAME. The Microtomist's	
Vademecum: DR. E. V. COWDRY	89
	09
Quotations:	01
The Paris Bureau of Scientific Information	91
Scientific Books:	
Grondal's The Music of the Spheres: PROFESSOR	
FRANK SCHLESINGER. Thienemann's Die Binnen-	
gewässer Mitteleuropas: PROFESSOR CHANCEY	
JUDAY	92
Scientific Apparatus and Laboratory Methods:	
The Ring Method for Surface Tension Measure-	~~
ment: DR. J. M. JOHLIN	93
Special Articles:	
Buttermillà as a Fertilizer for Blueberries: DR.	
FREDERICK V. COVILLE.	94
Science News	x
-	

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.

THE INSTITUTE OF CHEMISTRY ADDRESS OF THE RETIRING PRESIDENT¹

My presidential address will be a summary of the work of the outgoing administration and an outline of the program for the future.

The work of my administration has been largely that of perfecting the machinery of organization and of winning recognition for the institute. The indiscretions to be expected from a youthful organization had given an unfavorable impression of the purpose of the institute. The institute has reached adolescence and has demonstrated its sincerity of purpose and high aims.

A code of ethics embodying the principles of professional conduct to govern the profession of chemistry has been formulated and adopted. This code of ethics merits public esteem and justifies confidence in the integrity of the chemist. The institute has established a standard of proficiency of such excellence as to insure competent and efficient service on the part of its members. To safeguard the profession of chemistry, the institute proposes to admit to fellowship only those of proved education, experience, competency and character. The educational requirement consists of a minimum of six years of collegiate and post-graduate training in chemistry or chemical engineering and at least two years of such training must be of an advanced nature. In addition to the six years' training, candidates for fellowship in the institute must have had a minimum of five years' experience and responsibility in the practice of the profession, and must, in addition, meet the requirements imposed by the council for character and American citizenship.

In order to provide means for the improvement of the economic status of the profession of chemistry, the institute has established a register of its membership in which there is a complete record of the training, experience and fitness for service of each individual member. It is not the purpose of the institute to act as an employment agency, but rather as an intelligence office, serving on the one hand the chemist and on the other the public seeking the service of the chemist.

The keynote of the institute is "service," and all its energies are focused on seeing that only those men

¹Given before the American Institute of Chemists, New York, May 8, 1926. who are adequately qualified for service in chemistry are designated as chemists, thus safeguarding the public against the quack and shyster chemists who are not only responsible for great economic losses but who are also instrumental in holding down the status of the profession of chemistry and of creating a false impression in the minds of the public as to the work of the chemist.

We have faith in the idea that the reputation of the profession of chemistry can be established by this means better than by any legislative action. We do not believe that genuine service can be guaranteed by legislating to prevent charlatans from pretending to be chemists.

We have provided a means for the appropriate recognition of the distinguished service rendered by individual members of the profession in the form of three medals to be awarded in the fields of governmental institutions, educational institutions and industry.

By "governmental" we mean to include federal and state laboratories and public research laboratories, such as the Rockefeller Institute and Mellon Institute.

Under "educational" we include all research institutions in which the prime aim is pure research. The institute proposes to seek the cooperation of the colleges, universities and technical schools in providing adequate and definite training for the profession of chemistry. While there are many of the schools giving adequate courses of training there are still too large a proportion of men being graduated with inadequate training. There is no differentiation between men who have had only a few courses in elementary chemistry and those who have specialized and done graduate work. We propose to eliminate this condition and try to get recognized the fundamental principle that the profession of chemistry requires certain fundamental training irrespective of specialized departments in which that training is later employed. We also wish to lend our aid in emphasizing the necessity for broad basic training for the profession of chemistry. To this end we propose to suggest that the course shall include sufficient English to enable the chemist to express himself with brevity, clarity, and force, sufficient foreign languages to facilitate keeping in touch with chemical progress in foreign countries, history enough to enable a chemist to understand the conditions of the present and anticipate demands of the future by a comparison of the observations he makes with the record of the past; a basic training in mathematics and physics sufficient to enable the chemist to apply the fundamental principles of chemistry to the solution of engineering problems, sufficient training in the fundamentals of philosophy, psychology, social science and economics to

orientate the chemist in his business relationships and to guarantee for him a place in the constructive element of society.

The institute is pledged to a policy of cooperation with all other societies and institutions serving chemistry as a science and as a profession.

BOUND BROOK, N. J.

M. L. CROSSLEY

THE TRAINING OF MEN FOR THE PROFESSION OF CHEMISTRY¹

Every one owes some of his time to the upbuilding of the profession to which he belongs.—*Theodore Roosevelt*.

IF it lie in my power to make the short address of this evening of any real service to you who hear it, I do not know what I could bring to your attention of greater importance at this time than the need of more attention, on the part of our institute, to some of the present-day problems of chemistry education. We can not as an organization be indifferent to the various interests of our science. Our interests are the universities' interests and also the public interests, and we have a work of our own to do; and being engaged in a labor of science we owe a debt to our educational institutions, and consequently should be prepared to respond to their call for help and advice in their educational work. I feel quite certain that the men who are in active service in the teaching profession and in academic research activities do not disparage to-day the investigations done in industry, and do not put a low value upon industrial work and take a narrow viewpoint of chemical studies carried on successfully outside of the academic atmosphere. We are all working for the accomplishment of a definite object, and the closer we can cooperate in our various problems the more easily and quickly will we achieve the final results for which we all are striving.

After a teaching experience of twenty-five years in an American university which has always played an important part educationally in the promotion and development of the pure and applied sciences, I feel that there is no subject that I am better qualified to speak about to you to-night and which is of more importance to our own profession than that dealing with the problem of training young men for actual service in the field of chemistry. While it is a function of our institute to help in every way that it can the status of the profession of chemistry, we must also ever keep in mind the fact that the first prerequisite for professional success is a thorough fundamental training in those subjects which meet best the needs of

¹Presidential address delivered before the American Institute of Chemists at their annual meeting held in Rumford Hall in the Chemists' Club, New York City, May 8, 1926.