

Chemistry Department Report

The significant facts concerning the Chemistry Department for the year starting September 1933 follow: -

On account of decreased appropriations the Department had to dispense with the services of a number of assistants and in addition Dr. Stillwell, an Associate in Inorganic Chemistry for a number of years. At the same time Miss Parr, an Associate, was given a leave of absence with half pay.

This year there will graduate about 35 chemical engineers and 35 chemists. This does not include the large number of majors in chemistry in Liberal Arts and Sciences who may follow chemistry or may use their chemical training in connection with allied subjects. There were about 155 graduate students in the Chemistry Department during the first semester, all of whom expect to obtain an advanced technical and research training in some branch of chemistry.

Certainly the prime function of the Department is to give this large number of students the proper fundamental chemical training for future work and everything else accomplished is incidental.

During this current year there are about 6 post Ph. D's. who are doing special research work. Of these, one is a Commonwealth Fund Fellow from the University of Edinburgh, one a National Research Council Fellow from Johns Hopkins, and a third a Rockefeller Foundation Fellow from the University of Argentine in Buenos Aires. A fourth is a Textile

Foundation Fellow.

A significant fact about the Chemistry Department is that many industrial fellowships exist, sponsored and supported financially by various concerns, with the object of making a fundamental research study in certain fields of general interest to the companies, without attempting to solve any immediate applied problems. Such Companies as Bauer and Black, Continental Oil, Commonwealth Edison, duPont Rayon, and Roessler and Hasslacher, are cooperating in this way.

Although for the most part the investigations of the senior staff and graduate students deal with theoretical problems which may contribute new fundamental knowledge for the general benefit of the science of chemistry, a few of the investigations have had a somewhat more general interest. Of these may be mentioned the nutrition investigations of Dr. Rose which have involved a study of the essential amino acids occurring in protein material. He has discovered a product hitherto unknown which is absolutely essential to life. An extensive investigation has been carried on for several years on the purification of flue gases in order to relieve the danger from the source in large cities. This has been attended with very great success.

This is the only department in the country where students are being trained in research on the structure of

materials by means of x-rays. Pure and applied x-ray research of textiles, cotton, airplane propellers, etc., are now under way and significant results have already been obtained.

For several years the chemistry of Jerusalem artichokes has been studied and experiments have demonstrated the feasibility of producing a levulose syrup from this source.

RA/E
February 6, 1934