May 19, 1943

Dean M. T. McClure
203 Lincoln Hall
Dear Dean McClure:

Herein is presented the annual report of the Chemistry Department for 1942-43.

STAFF

The year has been an extremely active one for all members of the departmental staff. Professor Adams was temporarily relieved of his administrative duties in order that he might devote most of his time to war work as a member of the National Defense Research Committee. Professor Keyes was given a half-time leave of absence from September 1 to December 31, 1942, and a full-time leave effective January 16, 1943, to enable him to serve as a consultant to the Chemicals Branch of the War Production Board. Drs. Audrieth, Nicholson, and Deem were called to active duty as officers in the armed forces. In addition, sixteen members of the senior staff and fifty-four assistants have been devoting varying proportions of their time to research projects under contracts between the University and the National Defense Research Committee, the War Production Board, and the Committee on Medical Research of the National Research Council. Several other members of the senior staff are serving in advisory capacities to various governmental agencies.
The defense activities of such a large proportion of the departmental faculty have necessitated several temporary replacement appointments and a tremendous number of adjustments in teaching and administrative duties. The latter need not be enumerated in detail. The more important staff changes have been the appointment of Dr. W. M. Langdon as assistant professor, Dr. Clay Lewis as instructor, and Mr. R. S. Hanmer and Mr. W. R. Manning as half-time instructors in the Division of Chemical Engineering; the appointment of Dr. Norman Rabjohn and Dr. R. B. Carlin as instructors in the Division of Organic Chemistry; and a change in status of Mr. R. M. Whitney from half to full-time instructor with duties divided between the Divisions of Physical Chemistry and Sanitary Chemistry. Despite the help of these temporary appointees, all members of the regular staff have been compelled to work overtime. This they have gladly done because of the contributions thereby made to the war effort.

Noteworthy honors have come to three members of the chemistry faculty during the past year. The degree of Doctor of Science was conferred upon Professor Adams by the University of Rochester. Dr. H. E. Carter was the recipient of the Eli Lilly Award. This consists of one thousand dollars in cash and a medal, and is conferred by the American Chemical Society upon the biochemist under 35 years of age who has made the most important research contributions during the year.
Recently Dr. H. F. Johnstone was selected for the William H. Walker Award of the American Institute of Chemical Engineers. This consists of a medal, and is awarded annually for the most outstanding contribution to chemical engineering literature.

ENROLLMENT

The following table shows the total enrollment in courses, the number of freshmen, the number of graduate students, and the registration in the chemistry and chemical engineering curricula for the years 1941-43 and 1942-43.

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<thead>
<tr>
<th></th>
<th>1941-42</th>
<th></th>
<th>1942-43</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>I Semester</td>
<td>II Semester</td>
<td>I Semester</td>
<td>II Semester</td>
</tr>
<tr>
<td>Total enrollment in chemistry courses</td>
<td>4070</td>
<td>3351</td>
<td>4091</td>
<td>2989</td>
</tr>
<tr>
<td>Freshmen</td>
<td>1708</td>
<td>1121</td>
<td>1938</td>
<td>1180</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>185</td>
<td>174</td>
<td>159</td>
<td>153</td>
</tr>
<tr>
<td>Students in Chemistry Curriculum</td>
<td>209</td>
<td>153</td>
<td>205</td>
<td>123</td>
</tr>
<tr>
<td>Students in Chemical Engineering Curriculum</td>
<td>330</td>
<td>295</td>
<td>348</td>
<td>246</td>
</tr>
</tbody>
</table>

Total enrollment in courses, 1941-43 7,421
Total enrollment in courses, 1942-43 7,080
The data demonstrate that the enrollment has held up remarkably well in spite of the losses incidental to the call of students to military service. The number of graduate students has decreased by 32, or about 17 per cent, during the past two years. On the other hand, the total enrollment in courses for the session has diminished by only 4.6 per cent, and still amounts to 7080. This indicates the serious need of the Department for a more adequate building. During the past year it has been extremely difficult to find working space for students and for the large number of defense projects. The problem of laboratory facilities will be the subject of a separate letter at a later date.

TEACHING

Despite the numerous changes in teaching assignments made necessary by the part or full-time absence of many members of the staff, the quality of the teaching during the current session appears not to have suffered. I have inquired into this matter frequently, and have been assured by the division heads that the instructional standards of the Department are being maintained unimpaired. No significant alterations have been made in the course offerings. Certain courses with small registration have temporarily been omitted. These will be reinstated as promptly as the need for them warrants.
The demand for chemists and chemical engineers, with either the bachelor or advanced degrees, has been even more acute than in the past. Most of those who are to receive degrees in June have already accepted positions in industrial or research laboratories.

**SCIENTIFIC RESEARCH**

During the calendar year 1942, 109 scientific papers were published by members of the chemistry faculty. This is to be compared with 125 papers during the year 1941. This record is most gratifying. Many of the staff are devoting a large percentage of their research time to defense projects. Obviously, the results of these investigations are of a confidential nature and cannot be published until the cessation of hostilities. It is surprising that a larger decrease in the number of published articles did not occur. In addition to the scientific papers indicated above, three books by staff members have appeared. "Organic Reactions," Volume I, was published by an editorial board of leading American organic chemists of which Professor Adams is editor-in-chief, and of which Dr. H. R. Snyder is a member. "Organic Syntheses," Volume 22, was published by Professor Adams and Professor L. I. Smith of the University of Minnesota as co-authors. A new "Textbook of Organic Chemistry" was published by Drs. R. C. Fuson and H. R. Snyder.
Industrial firms and other organizations have continued to recognize the scientific productivity of the Department by furnishing numerous fellowships and special research assistantships. The fellowships are listed below.

1 Abbott Laboratories Fellowship 650
2 Allied Chemical and Dye Fellowships 750
1 Aeration Processes Fellowship 750
1 Analytical Research Fellowship 750
1 Eastman Kodak Fellowship 1000
1 Eli Lilly Fellowship 750
1 Monsanto Chemical Company Fellowship 750
1 New York Community Trust Fellowship 960
1 General Aniline Works Fellowship 750
1 DuPont Fellowship 750
1 Henry M. Strong Fellowship 600

In addition, 17 special research assistantships have been provided by foundations and others interested in the type of work being conducted by the Department. Furthermore, outside research grants for the purchase of materials and supplies have totaled approximately eleven thousand dollars.

DEFENSE PROGRAM

Defense activities of the staff under government contracts have steadily increased. During the fall, Dr. C. S. Marvel was placed in charge of a rubber research program under
the War Production Board. This made it necessary for him to discontinue his activities under the National Defense Research Committee. The rubber program is not only of great significance in the war effort, but represents an outstanding recognition of the previous attainments of Dr. Marvel and his colleagues in polymer chemistry. The fact that this program centers in this laboratory will be of immense value at the expiration of the war. We may confidentially expect that thereafter students who are interested in this broad area of chemistry will turn to the University of Illinois for training.

A new line of work involving the development of synthetic anti-malarial agents is now being conducted by Dr. C. C. Price under the Committee on Medical Research of the National Research Council. A Patents Testing Program under the direction of Dr. Sherlock Swann is being carried out for the War Production Board. These new projects, together with the National Defense Research Committee contracts, represent an annual expenditure of more than five hundred thousand dollars. Thus the Department has continued to perform its primary functions in teaching and research, while rendering an outstanding service to the country during the war emergency.

Sincerely yours,

Wm. C. Rose

WCR:cs
May 10, 1943

TO THE HEADS OF DEPARTMENTS

Gentlemen:

I am asking you to furnish me with an annual report of the work of your department for 1942-43.

The President has asked me to make this report in considerable detail, consequently I shall appreciate all the information you can give me regarding the activities of your department.

Could I have this report by the twentieth of May.

Very sincerely yours,

M. T. McClure
Dean

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