

THE JOURNAL
OF THE
AMERICAN CHEMICAL SOCIETY.

ADDRESS OF WELCOME TO THE WORLD'S
CHEMICAL CONGRESS.

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PRESIDENT OF THE AMERICAN CHEMICAL SOCIETY.

Delivered Monday, August 21, 1893.

GENTLEMEN: You have assembled here in response to the invitation of the World's Congress Auxiliary, tendered chiefly through the American Chemical Society, with the co-operation of the American Association for the Advancement of Science. On behalf of these organizations it becomes my pleasant duty to extend to you a cordial welcome.

The occasion of our meeting is no ordinary one. From the whole civilized world there have been collected in this city the fruits of man's inventive genius and of his industry. Accompanying these are the representatives of all nations, illustrating in their attire and villages the habits and customs of all countries. These varied collections and representatives reflect the life of all the continents and seas. With wondering eyes we have walked through Jackson Park, allured now by the masquerades of the Midway, and again by the palaces of the peristyle. Our eyes have been charmed by the aptly mingled colors of the painters, and bewildered by the brilliancy of the electric display. In hopeless wonder we have gazed at the broad acres of man's manufactures, engirdled by a gallery illustrating his appliances for education. The whole wealth of Ceres is lavishly portrayed in the palace of agriculture. By night the shore of the lake

and the borders of the South Pond are transformed into fairy scenes, more beautiful than the poet has ever pictured. The whole world of art, the whole world of work, and the whole world of skill are brought to us in a reality which, were it not so tangible, would seem the deception of a wizard.

For a week now we are called to leave this wonderful scene, the like of which has never before been revealed to the vision of men, for the purpose of studying for a time some of the aspects of one of those sciences which, still modest in its demeanor, has perhaps done more than any other to make the Jackson Park of to-day a possibility.

Illy suited for display, the science of chemistry is pleased to work to show the way to human progress, quite content to be forgotten when it is achieved. It asks for no white palace with imposing portals in which to display the wonders of its wealth. In odd nooks and corners, scattered over the vast expanse of space, attached to every other exhibit in an unobtrusive way, its silent work is revealed in countless combinations, the foundation of the arts. We may look in vain among the *bas-reliefs* for the names of Lavoisier, Priestley, Berzelius, Liebig, Hoffman, Lawrence Smith, Silliman or Chevreul, but the fruits of their labors may be found in almost every exhibit.

Chemistry is truly cosmopolitan. There is no one country that can claim it entirely, either by birth or adoption, Wurtz to the contrary notwithstanding. It is therefore entirely fit and proper that the chemists of all nations should now and then meet on common terms for the sake of mutually profiting by the advances and discoveries that each has made. I believe there will be brought before the present congress a proposal for the regular triennial meeting of the chemists of the world, after the plan which has been followed so successfully by our brethren the geologists and physicians. Were the object of such a congress only to listen to papers and addresses pertaining to the progress and development of our science, it might well be asked whether such conventions are useful. The chemical journals of to-day fully cover the whole field of chemical activity, and thus even in the most remote mining camp the chemist and assayer may be fully *en rapport* with his fellows the world over. But the

objects of our congress are wider than the mere listening to papers. The chemist is a social being, and there is a life outside of the laboratory as beautiful and useful as the life within. The narrowness of an idea and the flattening of isolation are to be avoided as the purpose of an investigation is to be pursued. The highest culture is not found in books, but in men. The power and splendor of a great and old university are not alone in its libraries and professors. There is a subtle influence of association that does more, often, than the lecture room to develop mind and mold character. And thus to widen his horizon and broaden his views the chemist must leave his desk and seek the acquaintance of his fellows. Every time you take a brother chemist by the hand you enlarge your life and extend your strength, and the farther apart the field of your activities, the greater the benefit.

Dogmatism in science is no less reprehensible than dogmatism in theology, and yet many of us have seen samples of it. Believe if you will in a literal Adam, but for the sake of our science avoid that state which throws a saintly halo of supernatural splendor about a hypothetical sechseck.

Our science has grown to such proportions as to demand specialization. He who hopes to add anything to the sum of chemical knowledge must be content to seek the gems of discovery in a very small part of the whole field. A few years ago the family physician was doctor, surgeon, phlebotomist and dentist. Now he is a neurist, oculist, or orthopedist. If you want to be doctored all over you must call half a hundred specialists. So too with the chemist. Many of us can remember when physics and chemistry were so united as to be taught often by one man, who also employed his leisure moments in giving instruction in geometry and evidences of Christianity. Now a man devotes his whole life to the elucidation of a single phase of one of the many branches of chemical science. The necessity of this specialization is admitted by every one. The benefits which it brings we all enjoy; the dangers which it engenders we are too apt to forget. The one great danger is to the worker who goes deepest into the well after truth. He loses sight of the rest of the world. He is prone to think those who

are in the other wells are only diggers, and those who take the rough gems he finds and polishes them for use, mere sordid barterers. It thus happens that the one thing sought for is so magnified in the eyes of the worker as to make the value of all other things grow small. He who should above all have the largest views of the works of others thus often comes to have the smallest, and would if possible set up a chemical inquisition. There is no branch of our science which is to be crowned king and leader. Chemistry is a pure democracy, and all are equal therein. I have been more than once pained to see men of eminent achievements disclose the narrowness of their views by sneering at really good work not in their line. Gentlemen, this must not be! There is no eminence in science which makes a sneer becoming. My plea to-day in bidding you welcome to this convention is for a wider and deeper fraternity. The many sections of chemical science represented on our program are asked to join hands. For this reason the committee on program has desired that all members of the congress be given an opportunity to be present at the meetings of each section, and it is the earnest wish of those who have been charged with the preliminary work that we cultivate this community of feeling. Because, for instance, you may be investigating some problem in the domain where physics and chemistry touch, I beg of you not to despise the labors of him who in the domain of technical chemistry is striving to give a working body to your thought. Take him by the hand, listen to his speech, and it will do you good.

In this country our chemical workers have been widely scattered. Our friends from abroad must not, therefore, be surprised to find less *esprit du corps* among us than in their own countries. We have been whirled hither and thither in the wild molecular melange of a rapidly growing country. But now there are many centers of crystallization forming, and soon you will find among us more unity of action, more mutual helpfulness. One of the organizations which I have the good fortune to represent at this time is bringing into intimate relations large numbers of our American chemists and cementing them into a body which gives promise of lasting good in the future. Already

more than half a thousand American chemists have joined hands, and it is their united hand, big, brawny, and right honest in its grasp, which is extended to you to-day.

Thus in the lesson of this congress we learn not only of the special forms of activity as manifested in the titles of our papers, but we have before us a larger, unprinted program, a splendid plate, illuminated with the light of higher and broader views, bearing a greeting of good fellowship and fraternity and the promise of a more intimate union of all science.

**PROCEEDINGS OF THE CONGRESS ON CHEMISTRY
HELD IN CHICAGO, ILL., AUGUST 21
TO AUGUST 26, 1893.**

MONDAY, AUGUST 21.

THE congress was opened by H. W. Wiley, chairman of the Joint Committee and president of the American Chemical Society, who gave an address of welcome to the foreign and American delegates, and suggested the establishment of a Triennial International Congress on Chemistry to meet at various centers.

It was voted to appoint a committee of five to take the recommendation under consideration.

TUESDAY, AUGUST 22.

The session was opened by an address from Prof. E. Engler, of the Polytechnic School at Carlsruhe, who had been appointed honorary president for this day

The printed program of papers on analytical chemistry then followed as nearly as practicable, the following being presented in full or in abstract:

Opening Address. On Certain Distinct Advances in the Analytical Chemistry of Recent Years. Prof. A. B. Prescott, Ann Arbor, Mich.

On the Determination of Phosphoric Acid as Magnesium Pyrophosphate. Hugo Neubauer, Rostock.

Concerning the Method of Determining the Melting Point of Butter Fat. Prof. Adolf Mayer, Director of the Royal Experimental Station at Wageningen, Holland.