

plenty of interesting and useful matter to occupy their attention during that small part of their school course which can be devoted to this subject? And would not college teachers of physics prefer to have boys come to them from the schools well grounded in the elements of static mechanics, without kinetics, than to have them come with a very uncertain knowledge of both?

EDWIN H. HALL

CAMBRIDGE, MASS.,
September 23, 1909

THE INTERNATIONAL CONGRESS OF RADIOLOGY AND ELECTRICITY

AN international Congress of Radiology and Electricity is to be held in Brussels from September 13 to 15, 1910, under the patronage of the Belgian government and the French Physical Society. This is the second conference on the subject, the first having been held in Liège, in the autumn of 1905. The second conference, like the first, has on the honorary committee some of the leading scientists in Europe and America who are working along the lines included in the subjects of the conference. The list includes among others Madame Curie, Lord Rayleigh, Sir W. Ramsay, Sir J. J. Thomson, Sir O. Lodge, Sir Wm. Crookes, Professors Lorentz, Rutherford, Langevin, Arrhenius, Lenard, Goldstein, H. Poincaré, Planck, Righi, Schuster, Zeeman and certain eminent physicians.

The congress has for its chief purpose the bringing together of a number of scientists capable of discussing the fundamental problems arising out of the phenomena of radioactivity and ionization; of agreeing upon a standard terminology; of presenting reports embodying a summary of our knowledge on the various divisions of the subject; and of showing the medical and therapeutic applications of the phenomena. The conference is therefore of concern to physicists, chemists, biologists and medical practitioners.

The officers of the American committee are at present Professor Carl Barus, Brown University, Providence, R. I., chairman, and Professor G. F. Hull, Dartmouth College, Han-

over, N. H., secretary, to whom inquiries may be addressed.

The provisional program of the conference is as follows:

FIRST SECTION—TERMINOLOGY AND RADIOMETRY

Terminology.—Fundamental notions; ions, electrons, corpuscles, etc. Unification of notations.

Radiometry.—General methods of measurement; apparatus, units.

Measurement of radioactivity; supports of the radioactive body; its influences, standardization. The establishment of a unit of radiation. Applied radiometry.

SECOND SECTION—PHYSICAL SCIENCES

A. *Theories and Fundamental Hypotheses.*—The ether, its manifestations, its properties, its relations to matter. The electric and magnetic field, electrons and ions; formation and properties. Magnetic and electric properties of bodies; metallic conductivity, electrolysis; dielectric phenomena; magnetism. Contact electricity. Thermo-electricity. Electro-capillary phenomena.

B. *Radiation.*—Generation. Emission, absorption; phenomena of radiation. Observation and analysis of radiation. Spectroscopy. Physical and chemical effects of radiation, phosphorescence. Electro-optics and magneto-optics, the Zeeman effect. Applied radiology, apparatus.

C. *Radioactivity.*—Radioactive bodies; enumeration and distinctive characters of the methods of separation. Radioactivity of matter in general. Properties of radioactive substances. Radioactive transformation; emanation, induced activity, etc. Atomic disaggregation. Radioactive constants.

D. *Atomistics.*—Number, charge, mass and velocity of particles. Molecular and atomic structure; valency. Colloids; Brownian movements.

E. *Cosmical Phenomena.*—The atmospheric electric field; its origin, variations of electrical potential of the atmosphere; ionization of the atmosphere. Observatories for atmospheric electricity; organization. Systematic registry of atmospheric electricity. Atmospheric radioactivity; atmospheric precipitation. Distribution of radioactive substances on the surface and in the interior of the earth. Terrestrial magnetism. The aurora borealis and magnetic storms. Solar radiation; variability of the field of this radiation, its heterogeneity and influence on terrestrial phenomena. Solar magnetic fields.

THIRD SECTION—BIOLOGICAL SCIENCES

A. *Biology Proper.*—Under this schedule are to be included all communications relative to the

action of different radiations on organisms. The following topics have thus far been proposed as being suitable for special reports: (1) Action of the X-rays and of radioactivity on cellular structure; (2) action of radiations in general on the development of plants.

B. Medical Radiology.—Radio-diagnosis. This schedule is to include all the medical applications of radioscopy and radiography. Three topics have been admitted up to the present time as probably suitable for reports: (1) Rapid radiography; instantaneous radiography; (2) study of the stomach and of the intestines, from the physiologic and the pathologic points of view; (3) endo-diagnosis.

C. Radio-therapeutics.—Under this schedule will be included all reports appertaining to the treatment of diseases by radiation. (a) X-rays; (b) radioactivity; (c) other radiations. The following topics have also been provisionally considered: (1) The filtration of rays (X-rays and radioactivity); (2) radioactive medicines; (3) treatment of tumors by radium; (4) present state of photo-therapeutics and its different methods.

The specifications of the present program are merely provisional; they are to be considerably altered in the final revision. A special exposition of all apparatus and appliances comprehended under the present subject will be annexed to the congress.

Attention may finally be directed to certain rules of the congress.

Art. 2.—The following persons will be members of the congress and they alone will receive the publications: (1) the delegates of the Belgian public administration and the delegates of foreign governments; (2) donors, including those persons who have given a sum of 100 francs or more; (3) all persons who have contributed the sum of 20 francs. The wives of members as well as their unmarried children may be registered as associates at a fee of 10 francs. The same charge will be made to students.

Art. 3.—The members of the congress and their associates will alone have the right to participate in its scientific transactions, to take part in its excursions, etc.

All members will receive the publications in full, both before and after the session of the congress. They will be entitled to enter the exposition at Brussels gratuitously on presenting their cards.

It is particularly requested that all communications of a financial nature (membership fees, etc.) be addressed directly to the general secretary of the committee on organization, M. Daniel, No. 1 Rue de la Prévôté, Brussels, Belgium.

By order of the American Committee.

HANOVER, N. H.

G. F. HULL,
Secretary

WINTER MEETING OF THE AMERICAN CHEMICAL SOCIETY

The winter meeting of the society will be held in Boston, Mass., December 28 to 31 inclusive, in affiliation with the American Association for the Advancement of Science, whose associated societies meet throughout the week.

Railroad rates will probably be secured as usual and as there is to be a large gathering of scientists in Boston this winter, there will undoubtedly be a sufficient number of persons present to make these reduced rates available.

The society will meet in six divisions and two sections under the guidance of the officers enumerated below.

DIVISIONS

Agricultural and Food Chemistry.—Chairman W. D. Bigelow, Bureau of Chemistry, Washington, D. C.; secretary, W. B. D. Penniman, 213 Courtland St., Baltimore, Md.

Fertilizer Chemistry.—Chairman, F. B. Carpenter, Richmond, Va.; secretary, J. E. Breckenridge, Carteret, N. J.

Industrial Chemists and Chemical Engineers.—Chairman, A. D. Little, 93 Broad St., Boston, Mass.; secretary, B. T. Babbitt Hyde, 82 Washington St., New York City.

Organic Chemistry.—Chairman, R. S. Curtiss, University of Illinois, Urbana, Ill.; secretary, Ralph H. McKee, Orono, Maine.

Pharmaceutical Chemistry.—Chairman, A. B. Stevens, University of Michigan, Ann Arbor, Mich.; secretary, B. L. Murray, Merck & Co., New York City.

Physical and Inorganic Chemistry.—Chairman, C. H. Herty, Chapel Hill, N. C.; secretary, W. D. Bancroft, 7 East Ave., Ithaca, N. Y.

SECTIONS

Biological Chemistry.—Chairman, S. C. Pres-