Manufacturers, are cooperating as conveners of the Congress. This is the first such congress to be held, and it is anticipated that succeeding sessions will be held in the Dominions under the auspices of an Empire Council of Mining and Metallurgical Engineering Institutions, which it is hoped will be constituted as a result of the inaugural congress. Viscount Long of Wraxall will deliver the Sir Julius Wernher Memorial Lecture of the Institution of Mining and Metallurgy at the opening session, taking mineral resources and their relation to the prosperity and development of the Empire as his subject. The May Lecture of the Institute of Metals to be delivered by Dr. F. W. Aston, on "Atoms and isotopes," will also form part of the program.

TWENTY leaders in the American pulp and paper industry have been asked by Secretary of Agriculture Wallace to form an advisory committee to work with the United States Department of Agriculture in formulating and carrying out its forestry policies which relate to the supply and use of timber in making paper and kindred products. Hugh P. Baker, secretary of the American Pulp and Paper Association, has been active in the formation of the advisory committee and has conferred concerning the matter with Chief Forester Greeley and E. H. Clapp, director of research for the Forest Service. Secretary Wallace states that the creation of an advisory committee composed of men intimately concerned with the pulp and paper industry will, in his opinion, insure thorough consideration of requests for advice as well as bring forth advice itself which would deal in a searching and practical way with the fundamental problems of the industry. Among the activities of the department closely concerned with the pulp and paper industry are the research in pulp and paper-making conducted at the Forest Products Laboratory at Madison, Wis., forest research in the growing of timber crops now under way at the various forest experiment stations, and the development of federal and state policies for the production of timber upon the country's forest lands.

HITHERTO the mathematical, physical and biological papers submitted to the Cambridge Philosophical Society have been published in one series of proceedings. In order to facilitate the publication of the results of biological research carried out in Cambridge, it has been decided to attempt the publication of a separate series of *Biological Proceedings*. The new series will consist largely of papers representing the results of completed work, and notices of preliminary investigations will be added as an appendix. The following constitute a committee to whom papers are referred prior to publication: H. R. Dean, F. G. Hopkins, A. C. Seward, J. T. Wilson, J. Barcroft, J. Gray, T. C. Nicholas and F. A. Potts.

UNIVERSITY AND EDUCATIONAL NOTES

TWO Atlanta women have left large legacies to Atlanta colleges. Miss Jane Walker Inman left $259,000 to Agnes Scott College to be used in establishing an endowment in honor of her brother. Mrs. Robt. J. Lowry left $275,000 to Ogelthorpe University to establish a school of commerce and banking in honor of her deceased husband, Colonel Robt. J. Lowry.

EDGAR ALLEN, formerly of Washington University, St. Louis, has been appointed professor of anatomy at the University of Missouri.

FRANK A. FERGUSON, associate professor of physics at Rutgers College, has been appointed head of the department of physics of the Connecticut Agricultural College.

JOHN L. BRAY has resigned his position as metallurgist with the U. S. Tariff Commission to accept the professorship in metallurgy at Purdue University.

DR. JOSEPH P. HETWER and Dr. Harry A. Beckman have been appointed instructors of physiology and pharmacology, respectively, in the Marquette Medical School.

WALTER C. KRAATZ, PH.D. (Ohio State University, '23), who has been instructor in the department of zoology at Ohio State University, is this year assistant professor and acting head of the department of zoology at Miami University, during the leave of absence of Professor S. R. Williams.

PROFESSOR JOHN READ, of the University of Sydney, and Professor Adam Patrick, of the University of Glasgow, were installed in the chairs of chemistry and medicine, respectively, at the University of St. Andrews on October 5.

DR. JAMES FRANCK has been appointed to the chair of physics in the University of Berlin, vacant by the death of Dr. Heinrich Rubens.

DISCUSSION AND CORRESPONDENCE

ACTIVE HYDROGEN BY ELECTROLYSIS

IN 1907 Fischer and Massenez[1] obtained a concentration of 17 per cent. by weight of ozone when they electrolyzed a solution of sulfuric acid, using a very high current density. Since ozone can be produced by this method, it would seem probable that a high current density at the cathode might aid in the production of the ozone form of hydrogen. When a solution of sulfuric acid is electrolyzed, using the above principle, the hydrogen that escapes at the cathode contains an active constituent which combines with pure nitrogen to form ammonia. Some of the am-

[1] *Z. Anorg. Chem.*, 52, 202 (1907).

monia formed is collected in the absorption bulb, but quite a large portion of it is dissolved by the sulfuric acid solution. This active constituent in the hydrogen that is evolved at the cathode is probably the ozone form, and is produced perhaps in a manner analogous to the ozone form of oxygen. The percentage of the active gas formed varies with the current density and the concentration of the acid.

Likewise, if a solution of potassium hydroxide is electrolyzed using a high cathode current density the escaping hydrogen contains the ozone form which combines with pure nitrogen to form ammonia.

In the electrolysis of the acid solution the escaping hydrogen contains a fog which persists after the gas has passed through the absorbing solution. This fog is similar to, but less dense than, the fog sometimes produced by ozone when it is bubbled through potassium iodide solution.

This work is a further verification of the theory of Dr. G. L. Wendt that triatomic hydrogen may be produced wherever atomic hydrogen is formed.

A. C. GRUBB

DEPARTMENT OF CHEMISTRY,
UNIVERSITY OF SASKATCHEWAN

SOLDNER, FOUCAULT AND EINSTEIN

IN your issue of August 31, pp. 161–163, you print Dr. Trumpler's defense of Einstein, yet as Trumpler does not touch at all upon one of my leading points, namely, Einstein's ignoring of Foucault's experiment of 1850, which disproved the emission theory of light —my criticism being that Einstein continued to use the emission theory as if it were lawful, whereas it has been outlawed now for 73 years—I will claim only a few lines of your space in order to supply Trumpler's omissions:

1. We do not deem it necessary to reply to Trumpler's labored defense of Einstein; his admissions are sufficiently damaging both to Einstein and to relativity. Soldner's paper bore the title, "Ueber die Ablenkung eines Lichtstrahls von seiner geradlinigen Bewegung durch die Attraktion eines Weltkörpers, an welchem er nahe vorbeigeht"—"On the deviation of a ray of light from its rectilinear motion through the attraction of a heavenly body near which it passes." Let this title speak for itself. I am willing to stand with Dr. P. Lenard, winner of the Nobel Prize in physics, long recognized as one of the leading physicists of our age.

2. Apparently Dr. Trumpler is unable to make a defense of Einstein in ignoring Foucault's celebrated experiment of 1850, showing that the velocity of light is less in water than in air, and therefore light is a *wave motion in the ether,* and is not corpuscular. It seems that Einstein, because he denies the existence of the ether, could not derive Soldner's formula of 1801, without adhering to the hypothesis of emission, that "Light is subject to gravitation." Soldner had a right to use the emission theory in 1801, half a century before Foucault's *experimentum crucis* of 1850; yet in 1911, Einstein was debarred, by every canon of science, from a similar procedure, because Foucault's work 60 years earlier had outlawed the corpuscular theory of light for all time. Thus Einstein's procedure in 1911–16 was wholly unlawful. The *Astronomical Society of France,* in the *Bulletin* for Sept., 1923, will take cognizance of the ignoring of Foucault's celebrated experiment.

T. J. J. SEE

MARE ISLAND, CALIFORNIA

No comment on the following note is required. I might request, however, that after reading it, the reader turn again to my note in the issue of SCIENCE for August 31, 1923, pp. 161–163.

ROBERT TRUMPLER

LICK OBSERVATORY

SIGMA XI

IN SCIENCE for October 5 I find on pages 259–260 a communication making certain statements regarding Sigma Xi.

It is said that "the policy of the Sigma Xi has been to refuse the granting of chapters to state colleges." This view is incorrect. Neither the convention nor the executive committee has ever directly or indirectly adopted any policy excluding or favoring one class of institutions above another. Both the executive committee and the convention have been very careful to consider every application absolutely on its merits. As a matter of fact at least one state college has been granted a chapter. I am confident that there is no prejudice either in the society in general or among the members of the executive committee against state colleges or any other particular group of institutions.

The other statements made concerning Sigma Xi involve comparisons the justification of which must rest on the judgment of the individual, but there are some who would dissent from other conclusions reached by the author of this communication.

HENRY B. WARD,
President

UNIVERSITY OF NEBRASKA

MODERN AND CLASSICAL GREEK

PROFESSOR EDWIN H. HALL has given in SCIENCE, Vol. LVIII, No. 1490, pp. 37–39, an eloquent and just tribute to the memory of his colleague and my admired classmate, Arthur Gordon Webster.

Dr. Hall refers in a footnote to Webster's addressing "in their own tongue assemblies of Greeks in Worcester." It should be stated, however, that this was not classical Greek. Webster succeeded where