

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