

fessional should be glad of all the support, moral and financial, which he can secure throughout the community, while there are many students who wish to keep advised of all progress as it is made.

Let the 'professionals' constitute the 'members' of the Society and let the test for 'membership' be as rigid as may be found necessary, so that being a member shall constitute *prima facie* evidence to the world of established professional ability and experience.

Let there also be a class of 'associates,' who shall include any respectable person of legal age (duly elected) who desires to join and is willing to pay the established dues.

All members should be elected as associates and any associate should have at all times the privilege of applying to a 'board of examiners' for election to full membership.

This course of procedure has been found satisfactory in the American Institute of Electrical Engineers and in other engineering bodies. It preserves to the professional all the honor and exclusiveness which he can desire, yet serves to draw into a compact and powerful organization all who for any reason wish to keep in touch with the most recent advances.

Such an inclusive policy would seem to be the wise course for all of our scientific societies, each of which is supposed to exist for the purpose of educating the public at large and of arousing a widespread interest in its specialty as well as for the benefit of its professional members.

J. STANFORD BROWN.

NEW YORK CITY.

THE PHYSIOLOGICAL EFFECTS OF THE ELECTRICAL CHARGE OF IONS.

IN No. 374 of SCIENCE Professor Lee gives a review of the Chicago meeting of the American Physiological Society in which he says that I 'maintained that vital phenomena, in general, are caused by the electrical charges of ions.' I wish to state that I have never held nor expressed such an opinion.

JACQUES LOEB.

THE UNIVERSITY OF CHICAGO,
March 3, 1902.

NOTES ON INORGANIC CHEMISTRY.

IN proposing the toast, 'The Houses of Parliament,' at the annual dinner of the fellows and associates of the Institute of Chemistry held in London last December, Professor Ramsay referred to the recent jubilee of Professor Berthelot in Paris and the cooperation of the French government with the scientific societies in honoring the distinguished chemist. He then said that while the British government often has occasion to take the advice of scientific experts, it does not as a rule honor science generally in the persons of those who have most distinguished themselves, as is done in many other countries. He called attention to the work of the chemists of the United States Geological Survey, and regretted that this example is not followed by the Geological Survey of Great Britain. Touching upon the question of water supplies, he gave it as his opinion that, valuable as the bacteriological examination of water is, it must be looked upon as merely confirmatory of the examination of the chemist. In responding to this toast for the House of Commons, Mr. Hanbury remarked incidentally that science would be of incomparably more practical value if its 'hideous terminology' could be done away with.

THE question of the existence of the ammonium radical, NH_4 , has been very exhaustively studied by Moissan, whose results are published in the *Comptes Rendus* and in the *Archives Néerlandaises*. His methods included the electrolysis of ammonium chlorid and ammonium iodid in solution in liquid ammonia, the examination of ammonium amalgam at a temperature as low as -90° , where the amalgam is perfectly stable, and the action of liquid hydrogen sulfid on lithium-ammonium and calcium-ammonium at -75° . In none of the experiments was any evidence of free ammonium found, incidentally confirming the recent results of Ruff. Moissan believes, however, that under some circumstances a hydrid of ammonium, NH_4H , is capable of existence.

The passivity of iron has been studied from the standpoint of physical chemistry by Finkelshtein. Determinations of its polarization