with the electric force in the vertical plane, nothing will be reflected at 45° incidence. This angle is in fact the polarising angle of the layer, and is independent of the frequency, and moreover does not depend on how the layer is graded, that is, whether it is a gradual or a sharp transition. Under these conditions only the direct ray will be received, the indirect ray not being reflected.

If this reasoning is correct the results obtained over these distances constitute not only a rough confirmation of the height measurements, but also of the assumed constitution of the layer.

T. L. ECKERSLEY.

Research Department,
Marconi's Wireless Telegraph Co., Ltd.,
Chelmsford.

British Chemical Glass.

PROF. W. E. S. TURNER, of the Department of Glass Technology in the University of Sheffield, in a letter to the *Times* of February 15, stated that "this industry . . . owes its inception to Sir Herbert Jackson and the hearty co-operation of several glass manufacturers in 1914 and 1915." I am sure that Sir Herbert Jackson would regret that the sole credit should be given to him and no mention made of Prof. Meldola, the chairman under whom he worked, and I trust, therefore, that NATURE will be able to find space to correct a statement so deficient as that made in the *Times*.

So early as August 29, 1914, Meldola realised the difficulties ahead, and wrote to a colleague: "I think of preparing a general plan of campaign for recovering British chemical industries lost through German competition." On September 22 he presided at a joint meeting of the Councils of the Institute of Chemistry and the Society of Public Analysts, at which special committees, one of them dealing with glass, porcelain, and filter-paper, were appointed. He was chairman of the latter committee and also of the special Glass Research Committee appointed on October 30 by the Institute of Chemistry. He presided at nearly all the numerous meetings of this committee, attending one only three days before he died, "working to the very last in his great desire to advance the interests of his country and of chemical science." I quote the words of his colleague, Prof. E. G. Coker, in the brief reminiscences of Meldola published by Williams and Norgate in 1916.

The letter which appeared in the *Times* is sufficient proof that these facts are not known as they should be or have passed out of mind. Nevertheless, there must be many who remember the debt that is owing to Raphael Meldola, and they surely will "see to it that his name be not forgotten."

EDWARD B. POULTON.

Oxford, February 25.

Names for Companion Stars.

ALTHOUGH it has not been customary to give specific names to the dark or inconspicuous companions of bright stars, there are one or two such bodies of so much interest and importance, and likely to be so constantly referred to in the science of the future, that perhaps exceptions might be made in their case. I write, therefore, to ask whether an outsider in astronomy may modestly make a suggestion for astronomers to consider, and to reject if they do not approve.

The companion of Sirius is so extraordinary a body, and the detection of its specific properties is the outcome of such brilliant work, that I suggest that the name Eddington might be applied to it. Presumably less is known about the companion of Algol—the first spectroscopic binary—and possibly, as it seems dark, it scarcely deserves a name; but the name of its discoverer, Vogel, might perhaps be attached to that.

These suggestions may be rather presumptuous; but no harm seems likely to be done by their publication.

OLIVER LODGE.

February 6.

The Nature of Active Nitrogen.

I HAVE not been able to follow in detail the recent discussion on the nature of active nitrogen, being closely occupied with other problems. It seems worth while, however, to direct attention to a part of my early work which seems to have dropped out of notice, but is, I believe, worthy of attention (Strutt, *Proc. Roy. Soc.*, A, vol. 86, pp. 264-267, 1911). It is there shown that the luminosity of active nitrogen can, as it were, be squeezed out of it by compression, the luminous emission of the α (1st positive) group of bands, and, perhaps the other series also, but this was not investigated, being immensely enhanced by compression. When the old volume is restored, it is found that the capacity to produce the glow is exhausted, though, apart from the compression, it would have lasted much longer.

The experiment was regarded at the time as proving that the action is bi-molecular, and I think is at least as telling as any other evidence pointing in the same direction.

RAYLEIGH.

Terling Place, Chelmsford,
February 27.

As the result of investigations which have been proceeding for some time, the writer, in collaboration with Dr. E. K. Rideal, has been able to show by three independent methods that the heat of formation of active nitrogen is about $-43{,}000$ cal. per gm. molecule.

This is in agreement with the value suggested by Strutt in 1911, and since it is known that the heat of dissociation of the nitrogen molecule is most probably of the order of $-300{,}000$ cal. per gm. molecule, the hypothesis that active nitrogen is atomic cannot well be substantiated. Rather would it appear that 'active' nitrogen represents a metastable molecule at not a very high energy level.

A full account of the investigations will shortly be published.

E. J. B. WILLEY.

Department of Physical Chemistry,
University of Cambridge.

A Mistaken Attribution in South American Linguistics.

WITH reference to the note under the above title in NATURE of February 20, p. 283, it may be of some interest to point out that the Arda in question no doubt refers to Ardra, Arder, or Allada, formerly one of the greatest towns on the Dahomian coast, which was conquered by King Agaja of Dahomey in 1724. The inhabitants speak a variety of Ewe, very similar to the ordinary Popo.

There was a considerable trade in slaves between Dahomey and the Brazils, and it is conceivable that descendants of Ardra slaves penetrated to the part of Amazonia mentioned in the text.

P. AMAURY TALBOT.

Bishopton,
Stratford-on-Avon,
February 22.