direct measurement of the evaporation energy of Zn_2 molecules. This last value was found from changes of the band absorption coefficient to be dependent upon the temperature of saturated zinc vapour. Preliminary microphotometric measurements of photographic plate density were made for three wave-lengths, 2313, 2502, and 2558 Å. for the range of temperatures 790°-920° C. The results of calculations give a number of values which do not differ more than 3 kcal./mol. from the average value 32 kcal.-mol. It is thus possible to give in a table a comparison of energies of evaporation of atoms (1), of corresponding molecules (2) and their dissociation energies (3), for three elements—zinc, cadmium, and mercury (in kcal./mol.):

	1.	2.	3.
Zinc . . .	30.5	32	29
Cadmium . . .	26.5	30	23
Mercury . . .	14.5	11	18

The value of evaporation energy of Hg_2 molecules was given by me in a former paper (l.c.); the dissociation energy of Zn_2 and Hg_2 molecules results from the corresponding evaporation energies of atoms and molecules; the value of evaporation energy of Cd_2 molecules were found by putting for the dissociation energy the value given by Jablonski.

These results show that the absorption band system of zinc vapour found by Mohler and Moore in the wave-length range 2636-2551 Å. corresponds to the $2^3P-1^1S_0$ atom transition. For the author found the continuation of this band system in the directions of shorter and longer wave-lengths; the limit of convergence of these bands corresponds sufficiently well to the calculated dissociation energy of Zn_2 molecules.

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Electronic Fine Structure in Helium Bands.

EXPERIMENTAL evidence for the triplet nature of the $2\pi^3\Pi_u$ and $2\pi^3\Pi_g$ terms of the helium molecule has recently been given by Prof. Mulliken and Dr. Monk

FIG. 1.

with their grating spectrograms of the band 6400 Å. (*Phys. Rev.*, **34**, 1530; 1929). The resolution into doublets (two of the triplet components being too near to be resolved) is more clearly shown on our interference spectrogram of the same band (Fig. 1).

The photograph was taken by projecting horizontal fringes formed by a 40-plate echelon (resolving power, c. 400,000) on to the fairly wide slit of a plane grating spectrograph, the latter giving a dispersion of 3.2 Å. per mm. in the first order. The exposure was one hour. The neon (impurity) line 6402.246 Å. served as the standard of measurements, as this line appears in two consecutive orders, their distance $\Delta\lambda_{\text{max}}$ being 0.64057 Å.

The measured doublet separations are :

BAND 6400 Å.									
Line.	Q_1 .	Q_3 .	Q_5 .	Q_7 .	Q_9 .	Q_{11} .	Q_{13} .	Q_{15} .	
$\Delta\lambda$ (Å.)	0.145	0.115	0.119	0.114	0.109	0.111	0.10	0.08	
$\Delta\nu$ (cm. ⁻¹)	0.354	0.281	0.290	0.278	0.266	0.271	0.24	0.21	

Line.	P_2 .
$\Delta\lambda$ (Å.)	0.110
$\Delta\nu$ (cm. ⁻¹)	0.268

Further investigation on this and other helium bands, using a tube cooled with liquid air, is in progress.

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Coloured Glass as a Deterrent to House Flies.

SOME years ago Messrs. W. P. Hartley, Ltd., jam manufacturers, Aintree, glazed their storage warehouses with yellow glass. The warehouses are connected by corridors which were glazed with ordinary glass. They noticed that whereas there were always plenty of flies in the corridors these never went into the warehouses. They then glazed the corridors with yellow glass, and found that they got rid of the flies from these also.

We have heard of other instances where coloured glasses have been used as a deterrent for flies, and we understand that some abattoirs have been glazed with blue glass.

As we were continually being asked for advice on this subject, we decided to carry out some experiments in an endeavour to ascertain whether the house fly was susceptible to coloured light, and if so, which colour was the best deterrent. We carried out a series of experiments last summer under advice from Prof. R. Newstead, and found that, everything else being equal, the house fly prefers white light to coloured light, and that red and yellow are the best deterrents. Blue and green are not nearly so effective. The loss in illumination with red glass being too great for general use, it appears that yellow is the best.

Although it cannot be claimed that the use of yellow glass is an absolute preventive, it is a very effective deterrent, and valuable for use in connexion with the storage of food.

We do not suggest the use of yellow glass for any building in which people are continually employed, because it has been found that yellow light is bad for the eyes and general health.

We cannot find a record of any work on this subject, and intend to continue our experiments during the coming summer. In the meantime we wonder whether any readers of NATURE have noticed this peculiar attitude of the house fly towards coloured light, and can offer any explanation.

PILKINGTON BROTHERS LTD.

Crown Glass Works,
St. Helens, Lancs.,
Mar. 17.