It will be observed that these thick and foggy nights, when heavy deposits of hoar-frost are formed, are the very nights on which little or no dew would be deposited, because the radiation would be checked by the fog. These, however, are the very nights most favourable for the deposit of hoar-frost, because the air has a large amount of vapour in it,—is in fact saturated. And further, while dew requires that the surface on which it is deposited be cooled by radiation, this is not so necessary, and indeed may be absent, in the formation of hoar-frost; because the fog particles radiate and cool the air to the saturated temperature of vapour at a water surface, and the passing air discharges part of its vapour on all ice crystals or other nuclei with which it comes in contact; the passing air at the same time absorbs the heat of crystallisation, while the heat of condensation is balanced by the heat absorbed by the evaporation from the water particles.

But, further, it will be observed that not only are those nights on which hoar-frost is most abundant not similar to the nights on which heavy dews are formed, but they are generally nights on which there would be no dew at all if the temperature was above the freezing-point; these hoar-frosty nights do not therefore correspond to dewy nights, when the temperature is higher, but rather to those nights when every object is wet and dripping, not with dew, but wet with deposited fog particles.

7. On the Quotient of a Simple Alternant by the Difference-Product of the Variables. By Dr Muir.

8. Investigations on the Influence of certain Rays of the Solar Spectrum on Root-Absorption and on the Growth of Plants. By Dr A. B. Griffiths, F.R.S.E., F.C.S. (Lond. & Paris), and Mrs A. B. Griffiths.

This paper details an investigation undertaken to see the influence of certain rays of white light on root-absorption and assimilation in the vegetable kingdom. One of us has been for some years investigating a problem as to the use of ferrous sulphate as a plant food (see Dr Griffiths' memoirs in *Journal of Chemical Society*