

the collision, the distance the electron traverse when its velocity becomes zero, increases under the retarding field. The increase in this distance means an increase in the number of times when the velocity of the electron tends to become zero. Since the probability of ionisation by a light quantum is a maximum when its energy just exceeds the ionising potential so that the kinetic energy of the photoelectrons is small, it follows from the principle of microscopic reversibility⁴ that the probability of combination is greatest when the electron collides with an ion. Under these circumstances, the probability of recombination is increased due to the excess of electrons approaching a velocity equal to zero and hence there might be a diminution in the discharge current in an alternating field under irradiation.

Whatever might be the true mechanism of the increase in current on irradiation, it may be emphasised that this light-effect has got some technical promises and applications in the future.

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ON AN OCCURRENCE OF MICA-PERIDOTITE FROM MIRZAPUR DISTRICT, UNITED PROVINCES

This note describes the occurrence of a very narrow and narrow dyke of Mica-peridotite at Chhipia village which has not been previously recorded. It is probably the westernmost occurrence of mica-peridotites, the other occurrences being more to the east in Hiridih, Jharia and Raniganj coalfields.

The rock is medium-grained, and black in colour with glistening flakes of deep brown mica. Greenish black grains of olivine and serpentine can also be seen. It effervesces with warm concentrated hydrochloric acid indicating the presence of dolomite.

The specific gravity of the rock is 2.97. Under the microscope, the grains of olivine are somewhat rounded, crystal boundaries are observed only in a few cases. The length of the crystals varies between 1.61 mm. and 0.99 mm., the average being 0.99 mm. Almost all the sections show serpentinisation, with inclusions of magnetite sometimes along the cleavage. In some cases, the serpentine is further altered to a mineral resembling talc. Generally, however, it is seen to be replaced by a fine-grained mosaic of dolomite.

Biotite is remarkably fresh and is strongly pleochroic from light yellowish brown to dark brown. Its flakes enclose grains of olivine giving an ophitic aspect. The flakes vary in



Photomicrograph of Mica-peridotite
Ordinary light $\times 31.25$

length from 0.26 mm. to 1.54 mm. In some instances bleaching of the interior is marked.

Augite which is subordinate in amount, is pale-green in colour and has an elongated form. A few small stout prismatic sections of common hornblende are observed. It also occurs in small greenish patches derived by the alteration of augite.

Magnetite occurs associated with serpentine, as inclusions in biotite, and in the form of dendritic skeletal crystals. But the inclusions of this mineral in biotite have well-developed outlines. Ilmenite is much less common and is seen altered to leucoxene. Haematite and limonite occur as small specks.

The study of the rock has been made under the guidance of Dr. H. L. Chhibber, Department of Geology, University of Lucknow. To him the writer is highly indebted.

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NEGATIVELY CHARGED FERRIC VANADATE SOL

WHEREAS the positively charged sols of ferric arsenate, phosphate, molybdate, tungstate and borate have been prepared and studied by Grimaux,¹ Holmes,² Dhar,² Prakash,⁴ and Ghosh,⁵ no attempt has been made to prepare and investigate their negatively charged sols. In a paper Prakash and Mushran⁶ investigated the detailed conditions under which these negatively charged sols can be obtained in this note the results with negatively charged ferric vanadate sol have been recorded.

When ammonium vanadate is added to ferric chloride solution, yellowish white precipitate of ferric vanadate is obtained. It is observed that the precipitated ferric vanadate can be dispersed by caustic soda in presence of glucose or glycerine to yield a clear deep