

Surface Structure of Polished Iridescent Shells

ELECTRON diffraction pictures were taken from the polished surfaces of the following iridescent shells:—

(1) *Lamelliderns marginalis*, (2) *Turbo*, (3) *Haliotis*, (4) *Nautilus pompilius*, and (5) *Margaritefera vulgaris*.

30 k.v. Electrons were used. The grinding and polishing were done with wet emery powder. The pictures show one or two diffuse rings, corresponding to a liquid or amorphous state. Thus it appears that here the process of polishing has converted the laminar body structure of the iridescent shells into an amorphous one.

In this connection it is worth recording that these shells in the polished state have been examined optically by Sir C. V. Raman^{1,2,3} and by X-rays by Rama Swamy^{4,5}; they find that in many cases the crystals of aragonite are arranged with considerable regularity so as to build up a laminated structure of nacre. The pieces of shells which are optically examined were about 0.1 mm. thick, and even here a body structure is observed. Thus the present work again shows that the electrons are even more suited for the examination of the surface structure than light.

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^{1,2,3} Raman, C. V., *Proc. Ind. Acad. Sci.*, 1935, **1A**, 567, 574 and 559.

^{4,5} Rama Swamy, S., *ibid.*, 1935, **1**, 871 and 1935, **2**, 345.