

NO. XXVI.—DEMONSTRATION OF SOME OF THE OPTICAL PROPERTIES
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(SUMMARY.)

[Read 26th April, 1909.]

THE chief object of the demonstration was to exhibit the figures shown by sections of minerals in convergent polarised light. The sections were arranged in two groups—

- (1) Sections of uniaxial minerals cut perpendicular to the optic axis.
- (2) Sections of biaxial minerals cut perpendicular to the acute bisectrix.

GROUP I.—Two sections of calcite, the one five millimetres thick, the other one millimetre thick, served to show the effect on the figure produced by thickening the section. The figures obtained by using sections of right- and left-handed quartz crystals were shown. By laying the one section above the other Airy's spirals were produced. The interference figures of various other uniaxial crystals were also to be seen.

GROUP II.—The interference figures produced by biaxial crystals were illustrated by sections of barytes, aragonite, and sanidine. A section of a sugar crystal cut perpendicular to one of the optic axis was shown, and the figure compared with that of a uniaxial crystal.

Several sections of pleochroic minerals were exhibited in order to show the marked variation in colour according to the direction of the section and the position of the section with regard to the vibration plane of the nicol-prism. Tourmaline, pennine, and hornblende were used as examples.

Slides containing small crystals of quartz and zircon illustrated the difference in refractive index of these minerals, and other rock sections were put under the microscope in order to show the difference in colour, cleavage, &c., of minerals.