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A VIEW OF THE PROGRESS OF DISCOVERY

IN NATURAL PHILOSOPHY, CHEMISTRY, MINERALOGY, GEOLOGY, BOTANY,
ZOOLOGY, COMPARATIVE ANATOMY, PRACTICAL MECHANICS, GEOGRAPHY,
NAVIGATION, STATISTICS, ANTIQUITIES, AND THE FINE AND USEFUL ARTS.

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JOHN THOMSON, EDINBURGH:
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and decreasing gradation of intensity reckoning from the centre, but at regular intervals, following, so to speak, a law analogous to that of *interference*. At the negative pole, where the electro-positive substances appear, we observe the same phenomenon, namely an alternation of circles of oxide and of pure metal. This alternation constitutes the second result which I have announced. May we suppose that the radiation of electric currents follows a law of interference? There exists, without doubt, certain alternations, but new experiments are necessary to discover their true origin.

REGGIO, November 20, 1826.

ART. XXXIII.—On *Haidingerite*, a new Mineral Species.

By EDWARD TURNER, M. D. F. R. S. E. Lecturer on Chemistry, and Fellow of the Royal College of Physicians, Edinburgh. Communicated by the Author.

IN an account of the analysis of two newly discovered minerals described by Mr Haidinger in the third volume of this *Journal*, it was my intention to have proposed for the second species, the Diatomous Gypsum-Haloide, the name of *Haidingerite*, in honour of the distinguished mineralogist who first noticed its existence. In this wish I had the pleasure to concur with Mr Ferguson of Raith, in whose cabinet the minerals were discovered; but as Mr Haidinger was not at that time in Britain, it was thought advisable to make no allusion to the subject until after his return. Having now gained his assent, I propose to employ the name of *Haidingerite* to designate the species above-mentioned, and have no doubt that this proposition will be favourably received by mineralogists.

In a recent scientific tour through the continent, made in company with Mr Robert Allan, Mr Haidinger hoped to meet with specimens of *Haidingerite*, and ascertain its locality. But in this he was unsuccessful. He could not discover it in any of the cabinets which he had an opportunity of inspecting, not even at Carlsruhe, among the numerous and superb specimens of the arseniates of lime and other products of the mines of Wittichen in the Black Forest, collected by the Ber-

grath Selb, and now in the possession of the Grand Duke of Baden. He ascertained, however, that the hemiprismatic gypsum-haloïde agrees exactly in form with pharmacolite. He saw distinct crystals of the latter, having the shape of Figure 4 of the paper above referred to. They are four-sided and eight-sided prisms, with an inclined base, and exhibit the same disproportionate enlargement of one of the faces of the prism *f*. Like other species which consist of arsenic acid, lime, and water, their origin depends on the oxidation of arsenical pyrites, or other minerals containing arsenic, and on the reaction of the arsenic acid so formed on calcareous spar.

The crystallized specimens of pharmacolite from St Marie aux mines, in Alsace, which have been lately found in considerable number, do not possess any very distinct forms; but in some of the more regular crystals the faces peculiar to the prismatic gypsum-haloïde are perceptible. The single distinct cleavage, and the slight degree of flexibility of the laminae, two characteristic properties of the same species, may likewise be observed.

The third species was recognized by Mr Haidinger in several crystalline fragments in the Royal Museum of Berlin; but their locality is unknown.

ART. XXXIV.—*An Account of Magnetical Experiments made in China and St Helena, with a view of determining the Position of the Plane of no deviation in those places.*

By Captain J. P. WILSON of the H. E. I. C. Ship Hythe.

Communicated by PETER BARLOW, Esq. F. R. S. Mem.

Imp. Ac. Petrop. &c.

IT is known, that, in the commencement of my experiments, I had conceived (for the purpose of generalizing and simplifying magnetic results) an ideal sphere to circumscribe the iron ball or shell on which the experiments were performed; and, according to my deductions, it seemed to follow that this sphere would occupy different positions on different parts of the globe. I also expressed a hope that the truth of this deduction might be verified by experiments. To meet my views