

## PREFACE TO THE THIRD EDITION.

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THE present differs from the preceding edition in some respects which appear to require notice in this place.

The most important additions and improvements that have been made, consist, *first*, in the introduction of notices or descriptions of about eighty minerals, of which the greater part have been discovered since the publication of the preceding edition; *secondly*, in the insertion of the results obtained by a careful examination of most crystalline minerals, as regards their structure and cleavage; *thirdly*, in the addition of a figure to the verbal description of most substances found in a crystallized state, representing the primary form, and another the secondary planes in connection with those of the primary crystal, together with such measurements of the planes as I have been able to obtain, chiefly by means of the reflective goniometer of Dr Wollaston; *in the fourth place*, advantage has been taken of a translation of Berzelius's excellent work on "The Use of the Blowpipe in Chemical Analysis and the Examination of Minerals, by J. G. Children, F.R.S. L. & E. &c." in so far as relates to the more simple experiments with that useful assistant to the student in recognizing minerals; and, *fifthly*, the meanings of the names by which minerals are commonly known in this country are mostly given at the foot of the page containing the description, except where, being chemical, they manifestly have been derived from the composition of the substance.

In regard to arrangement, no alteration has been made in this edition, except where new and more satisfactory analyses demanded a change: on the subject of the arrangement, therefore, it seems requisite only to add, that, having in the first instance