

Abstract Submission

T3 - Minerals, systematics, gems, collections
New Minerals, Nomenclature, and Classification

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CNMNC guidelines for the nomenclature of polymorphs and polysomes

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Abstract Content: Examination of the CNMNC mineral list shows that there are still few inconsistencies in mineral names, concerning the use of polymorph suffixes which may contain Greek symbols, Roman numerals, letters, space group notations, or unit-cell parameter values. In order to uniformize this nomenclature, we define new guidelines:

- *Polymorphs with different crystal systems* are distinguished by the prefixes cubo- (cubic), hexa- (hexagonal), tetra- (tetragonal), trigo- (trigonal), ortho- (orthorhombic), clino- (monoclinic), and anortho- (triclinic).
- *Polymorphs with different crystal systems but with a pseudosymmetry* should show the prefix "*pseudo-*".
- *Polymorphs with the same crystal system but different space groups* are distinguished by the prefix "*para-*". If three or more polymorphs show the same crystal system but different space groups, the space group notation may be added as a suffix, but such a nomenclature should be avoided if possible.
- *Polymorphs with the same space group* are distinguished by the prefix "*-para*".
- *Minerals with polymorph suffixes but with different chemical compositions* cannot be considered as true polymorphs, so we recommend using the prefix "*meta-*", which indicates a close but significantly different chemical composition.
- *Polysomatic symbols* have to be placed as a suffix, which indicates the number and types of modules which alternate in the structure as in the högbomite supergroup, or as prefixes as in the sartorite homologous series.

These recommendations have to be applied for future new mineral proposals, but the modifications of historical and well-established names have to pass through the CNMNC for approval.

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