

Supplementary Materials

Figure S1. Map of Somma–Vesuvius volcano (southern Italy), with some of the localities cited in the text (modified from <https://www.google.it/maps/>).

Table S1. Crystallographic and complexity information of Cu-bearing minerals from Somma–Vesuvius.



Figure S1. Map of Somma–Vesuvius volcano (southern Italy), with some of the localities cited in the text (modified from <https://www.google.it/maps/>).

Table S1. Crystallographic and complexity information of Cu-bearing minerals from Somma–Vesuvius.

Space group	Name	Formula	v	bits/atom	bits/cell
<i>Pnma</i>	Atacamite	$\text{Cu}_2(\text{OH})_3\text{Cl}$	36	2.725	98.117
<i>P2_1/c</i>	Azurite	$\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$	30	2.974	89.207
<i>P2_1/c</i>	Boothite	$\text{Cu}(\text{SO}_4) \cdot 7\text{H}_2\text{O}$	108	4.792	517.528
<i>P2_1/c</i>	Brochantite	$\text{Cu}_4(\text{SO}_4)(\text{OH})_6$	84	4.392	368.955
<i>P-1</i>	Chalcanthite	$\text{Cu}(\text{SO}_4) \cdot 5\text{H}_2\text{O}$	42	4.44	186.477
<i>Pnma</i>	Chalcocyanite	$\text{Cu}(\text{SO}_4)$	24	2.252	54.039
<i>Pnma</i>	Chlorothionite	$\text{K}_2\text{Cu}(\text{SO}_4)\text{Cl}_2$	40	3.122	124.877
not solved	Chrysocolla	$\text{Cu}_4\text{H}_2(\text{Si}_2\text{O}_5)(\text{OH})_4 \cdot n\text{H}_2\text{O}$			
<i>P-1</i>	Cryptochalcite	$\text{K}_2\text{Cu}_5\text{O}(\text{SO}_4)_5$	132	6.044	797.86
<i>Pn-3m</i>	Cuprite	Cu_2O	6	0.918	5.51
<i>P2_1/c</i>	Cyanochroite	$\text{K}_2\text{Cu}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$	62	3.986	247.16
<i>P2_1/c</i>	Dravertite	$\text{CuMg}(\text{SO}_4)_2$	24	2.752	66.039
<i>P2_12_12_1</i>	Euchlorine	$\text{KNaCu}_3\text{O}(\text{SO}_4)_3$	84	4.44	372.955
<i>P2_1/c</i>	Kröhnkite	$\text{Na}_2\text{Cu}(\text{SO}_4)_2 \cdot 2\text{H}_2\text{O}$	38	3.301	125.421
<i>C2/c</i>	Leightonite	$\text{K}_2\text{Ca}_2\text{Cu}(\text{SO}_4)_4 \cdot 2\text{H}_2\text{O}$	36	3.392	122.117

<i>P2₁/m</i>	Linarite	PbCu(SO ₄)(OH) ₂	22	3.278	72.107
<i>P</i> -1	Litidionite	K ₂ Na ₂ Cu ₂ (Si ₈ O ₂₀)	34	4.087	138.974
<i>P2₁/c</i>	Malachite	Cu ₂ (CO ₃)(OH) ₂	40	3.322	132.877
<i>Pnma</i>	Mottramite	PbCu(VO ₄)(OH)	36	2.948	106.117
<i>C2/m</i>	Natrochalcite	NaCu ₂ (SO ₄) ₂ (OH)·H ₂ O	18	3.059	55.059
<i>R</i> -3	Paratacamite	Cu ₃ Cu(OH) ₆ Cl ₂	72	3.707	266.872
<i>R</i> -3	Paratacamite-(Mg)	Cu ₃ Mg(OH) ₆ Cl ₂	72	3.707	266.872
<i>R</i> -3	Paratacamite-(Ni)	Cu ₃ Ni(OH) ₆ Cl ₂	72	3.707	266.872
<i>P</i> -1	Starovaite	KCu ₅ O(VO ₄) ₃	44	4.459	196.215
<i>C2/c</i>	Tenorite	CuO	4	1	4
<i>P2₁/m</i>	Tsumebite	Pb ₂ Cu(SO ₄)(PO ₄)(OH)	30	3.64	109.207
<i>C2/m</i>	Volborthite	Cu ₃ V ₂ O ₇ (OH) ₂ ·2H ₂ O	44	4.459	196.215
