

IMA Commission on New Minerals, Nomenclature and Classification (CNMNC)

NEWSLETTER 28

New minerals and nomenclature modifications approved in 2015

U. HÄLENIUS¹ (Chairman, CNMNC), F. HATERT² (Vice-Chairman, CNMNC), M. PASERO³ (Vice-Chairman, CNMNC) AND S. J. MILLS⁴ (Secretary, CNMNC)

¹ Department of Mineralogy, Naturhistoriska Riksmuseet, Box 50007, SE-104 05 Stockholm, Sweden – ulf.halenius@nrm.se

² Laboratoire de Minéralogie, Université de Liège, B-4000 Liège, Belgium – fhatert@ulg.ac.be

³ Dipartimento di Scienze della Terra, Università di Pisa, Via Santa Maria 53, I-56126 Pisa, Italy – marco.pasero@unipi.it

⁴ Geosciences, Museum Victoria, PO Box 666, Melbourne, Victoria 3001, Australia – smills@museum.vic.gov.au

The information given here is provided by the IMA Commission on New Minerals, Nomenclature and Classification for comparative purposes and as a service to mineralogists working on new species.

Each mineral is described in the following format:

Mineral name, if the authors agree on its release prior to the full description appearing in press

Chemical formula

Type locality

Full authorship of proposal

E-mail address of corresponding author

Relationship to other minerals

Crystal system, Space group; Structure determined, yes or no

Unit-cell parameters

Strongest lines in the X-ray powder diffraction pattern

Type specimen repository and specimen number

Citation details for the mineral prior to publication of full description

Citation details concern the fact that this information will be published in the *Mineralogical Magazine* on a routine basis, as well as being added month by month to the Commission's web site.

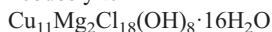
It is still a requirement for the authors to publish a full description of the new mineral.

NO OTHER INFORMATION WILL BE RELEASED BY THE COMMISSION

NEW MINERAL PROPOSALS APPROVED IN OCTOBER 2015

IMA No. 2015-063

Feodosiyite



Glavnaya Tenoritovaya (Major Tenorite) fumarole, Second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption, Tolbachik volcano, Kamchatka Peninsula, Far-Eastern Region, Russia (55° 41'N, 160°14'E, 1200 m asl)

Igor V. Pekov*, Natalia V. Zubkova, Vasiliy O. Yapaskurt, Dmitry I. Belakovskiy, Inna S. Lykova, Marina F. Vigasina, Sergey N. Britvin, Evgeny G. Sidorov and Dmitry Y. Pushcharovsky

*E-mail: igorpekov@mail.ru

New structure type

Monoclinic: $P2_1/c$; structure determined

$a = 12.9010(6)$, $b = 16.4193(5)$, $c = 11.9614(5)$ Å,
 $\beta = 113.691(6)^\circ$

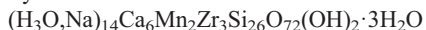
11.87(100), 6.585(15), 5.969(25), 5.905(16),
5.231(13), 5.183(6), 3.135(8), 2.924(11)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia, registration number 4723/1

How to cite: Pekov, I.V., Zubkova, N.V., Yapaskurt, V.O., Belakovskiy, D.I., Lykova, I.S., Vigasina, M.F., Britvin, S.N., Sidorov, E.G. and Pushcharovsky, D.Y. (2015) Feodosiyite, IMA 2015-063. CNMNC Newsletter No. 28, December 2015, page 1860; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-065

Ilyukhinite



Mount Kukisvumchorr, Khibiny alkaline massif, Kola Peninsula, Russia

Nikita V. Chukanov*, Ramiza K. Rastsvetaeva, Kseniya A. Rozenberg, Sergey M. Aksenov, Igor V. Pekov, Dmitry I. Belakovskiy and Roy Kristiansen

*E-mail: nikchukanov@yandex.ru

Eudialyte group

Trigonal: $R\bar{3}m$; structure determined

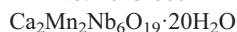
$a = 14.1695(6)$, $c = 31.026(1)$ Å

11.44(82), 7.09(70), 6.02(44), 4.371(89), 3.805(47),
3.376(41), 2.985(100), 2.852(92)

Type material is deposited in the collections of the Geological Museum, Natural History Museum, University of Oslo, Norway, catalogue number GM 43578

How to cite: Chukanov, N.V., Rastsvetaeva, R.K., Rozenberg, K.A., Aksenov, S.M., Pekov, I.V., Belakovskiy, D.I. and Kristiansen, R. (2015) Ilyukhinite, IMA 2015-065. CNMNC Newsletter No. 28, December 2015, page 1860; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-067



AS Granit larvikite quarry (4th level), Tvedalen, Larvik, Vestfold, Norway (59°2.353'N, 9°51.413' E)

Henrik Friis, Mark T. Weller and Anthony R. Kampf

*E-mail: geofriis@yahoo.com

New structure type

Triclinic: $P\bar{1}$; structure determined

$a = 9.081(4)$, $b = 9.982(8)$, $c = 10.60(1)$ Å, $\alpha = 111.07(8)$, $\beta = 101.15(6)$, $\gamma = 99.39(5)^\circ$

9.282(36), 8.610(100), 7.108(14), 5.412(12),
3.257(30), 3.058(18), 2.715(17), 2.628(12)

Cotype material is deposited in the collections of the Natural History Museum, University of Oslo, P.O. Box 1172, Blindern, 0318 Oslo, Norway, catalogue numbers 43584, 43585 and 43586, and the Mineral Sciences Department, Natural History Museum of Los Angeles County (900 Exposition Boulevard, Los Angeles, California 90007, USA), catalogue number 64165

How to cite: Friis, H., Weller, M.T. and Kampf, A.R. (2015) IMA 2015-067. CNMNC Newsletter No. 28, December 2015, page 1860; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-068

Dargaite



Hatrurim Complex, Judean Mts, West Bank, Palestinian Autonomy, Israel (31°36.5'N, 35°22.7'E)

Frank Gfeller, Irina O. Galuskina, Evgeny V. Galuskin*, Thomas Armbruster, Yevgeny Vapnik, Mateusz Dulski, Mariusz Gardocki, Lidia Ježak and Mikhail Murashko

*E-mail: evgeny.galuskin@us.edu.pl

The Ba analogue of nabimusaitite

Trigonal: $R\bar{3}m$; structure determined

$a = 7.1874(4)$, $c = 41.292(3)$ Å

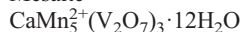
3.103(100), 2.753(95), 2.750(88), 2.665(63), 2.141(43), 1.987(35), 1.797(62), 1.539(58)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Leninskiy pr., 18/k2, 115162 Moscow, Russia, catalogue number 4713/2

How to cite: Gfeller, F., Galuskina, I.O., Galuskin, E.V., Armbruster, T., Vapnik, Y., Dulski, M., Gardocki, M., Ježak, L. and Murashko, M. (2015) Dargaite, IMA 2015-068. CNMNC Newsletter No. 28, December 2015, page 1860; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-069

Mesaite



Packrat mine, near Gateway, Mesa Co., Colorado, USA (38°38'51.28"N 109°02'49.77"W)

Anthony R. Kampf*, Barbara P. Nash, Joe Marty and John M. Hughes

*E-mail: akampf@nhm.org

Loosely related to fianelite

Monoclinic: $P2_1/n$; structure determined

$a = 9.146(2)$, $b = 10.424(3)$, $c = 15.532(4)$ Å,
 $\beta = 102.653(7)^\circ$

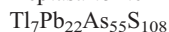
10.47(100), 8.60(10), 4.30(11), 3.568(24), 3.132(11), 3.067(17), 2.881(25), 2.615(11)

Cotype material is deposited in the collections of the Natural History Museum of Los Angeles County, Los Angeles, California, USA, catalogue numbers 65595, 65596, 65597, 65598 and 65599

How to cite: Kampf, A.R., Nash, B.P., Marty, J. and Hughes, J.M. (2015) Mesaite, IMA 2015-069. CNMNC Newsletter No. 28, December 2015, page 1861; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-073

Heptasartorite



Lengenbach quarry, Binntal, Wallis, Switzerland (46°21'54"N, 8°13'16"E)

Dan Topa*, Berthold Stroeger, Emil Makovicky, Peter Berlepsch and Chris Stanley

*E-mail: dan.topa@nhm-wien.ac.at

Sartorite homologous series

Monoclinic: $P2_1/c$; structure determined

$a = 29.269(2)$, $b = 7.8768(5)$, $c = 20.128(2)$ Å,
 $\beta = 102.065(2)^\circ$

9.84(72), 3.86(59), 3.52(100), 3.46(51), 2.955(75), 2.952(58), 2.753(73), 2.752(73)

Type material is deposited in the mineralogical collections of the Naturhistorisches Museum Wien, Austria, catalogue number N 9859

How to cite: Topa, D., Stroeger, B., Makovicky, E., Berlepsch, P. and Stanley, C. (2015) Heptasartorite, IMA 2015-073. CNMNC Newsletter No. 28, December 2015, page 1861; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-074

Enneasartorite



Lengenbach quarry, Binntal, Wallis, Switzerland (46°21'54"N, 8°13'16"E)

Dan Topa*, Peter Berlepsch, Emil Makovicky, Berthold Stroeger and Chris Stanley

*E-mail: dan.topa@nhm-wien.ac.at

Sartorite homologous series

Monoclinic: $P2_1/c$; structure determined

$a = 37.612(6)$, $b = 7.8787(1)$, $c = 20.071(3)$ Å,
 $\beta = 101.930(2)^\circ$

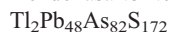
9.82(67), 3.86(63), 3.51(100), 3.46(51), 2.953(61), 2.949(76), 2.752(71), 2.751(73)

Type material is deposited in the mineralogical collections of the Naturhistorisches Museum Wien, Austria, catalogue number N 9860

How to cite: Topa, D., Berlepsch, P., Makovicky, E., Stroeger, B. and Stanley, C. (2015) Enneasartorite, IMA 2015-074. CNMNC Newsletter No. 28, December 2015, page 1861; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-075

Hendekasartorite



Lengenbach quarry, Binntal, Wallis, Switzerland (46°21'54"N, 8°13'16"E)

Dan Topa*, Emil Makovicky, Peter Berlepsch, Berthold Stroeger and Chris Stanley

*E-mail: dan.topa@nhm-wien.ac.at

Sartorite homologous series

Monoclinic: $P2_1/c$; structure determined

$a = 31.806(5)$, $b = 7.889(12)$, $c = 28.556(4)$ Å,
 $\beta = 99.034(2)^\circ$

9.76(56), 3.87(69), 3.50(100), 3.46(51), 2.947(66), 2.941(76), 2.753(73), 2.751(73)

Type material is deposited in the mineralogical collections of the Naturhistorisches Museum Wien, Austria, catalogue number N 9861

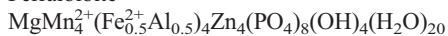
How to cite: Topa, D., Makovicky, E., Berlepsch, P., Stroeger, B. and Stanley, C. (2015)

Hendekasartorite, IMA 2015-075. CNMNC Newsletter No. 28, December 2015, page 1861; *Mineralogical Magazine*, **79**, 1859–1864.

NEW MINERAL PROPOSALS APPROVED IN NOVEMBER 2015

IMA No. 2015-066

Ferraioloite



East dump of the Foote Lithium Company mine, Kings Mountain district, Cleveland Co., North Carolina, USA (35°12'40"N, 81°21'20"W)

Stuart J. Mills*, Ian E. Grey, Anthony R. Kampf, Colin M. MacRae, Jason B. Smith, Cameron J. Davidson and A. Matt Glenn

*E-mail: smills@museum.vic.gov.au

Closely related to falsterite

Monoclinic: $I2/m$; structure determined

$a = 25.333(3)$, $b = 6.299(1)$, $c = 15.161(3)$ Å,
 $\beta = 90.93(3)^\circ$

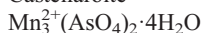
12.7(100), 4.78(4), 4.22(4), 3.580(4), 3.499(5),
3.245(7), 2.924(8), 2.869(5)

Cotype material is deposited in the mineralogical collections of the Museum Victoria, Melbourne, Australia, registration numbers M53492 and M53493, and the Natural History Museum of Los Angeles County, Los Angeles, California, USA, catalogue numbers 65593 and 65594

How to cite: Mills, S.J., Grey, I.E., Kampf, A.R., MacRae, C.M., Smith, J.B., Davidson, C.J. and Glenn, A.M. (2015) Ferraioloite, IMA 2015-066. CNMNC Newsletter No. 28, December 2015, page 1862; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-071

Castellaroite



Monte Nero mine, Rocchetta Vara, La Spezia, Liguria, Italy (44°14'48"N, 9°45'27"E) – type locality; Valletta mine, near Canosio, Piedmont, Italy (44°23'42"N, 7°5'42"E) – cotype locality

Anthony R. Kampf*, Fernando Cámara, Marco E. Ciriotti, Barbara P. Nash, Corrado Balestra and Luigi Chiappino

*E-mail: akampf@nhm.org

Structurally related to metaswitzerite

Monoclinic: $P2_1/n$; structure determined

$a = 8.752(2)$, $b = 13.463(4)$, $c = 18.636(6)$ Å,
 $\beta = 94.851(7)^\circ$

10.90(100), 9.27(67), 6.97(42), 3.323(47),
3.043(87), 2.656(85), 2.165(46), 1.559(32)

Type material is deposited in the mineralogical collections of the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue numbers 65603 (holotype - MN) and 65604 (cotype - MN), and the Museo Regionale di Scienze Naturali di Torino, Sezione di Mineralogia, Petrografia e Geologia, via Giovanni Giolitti 36, I-10123 Torino, Italy, catalogue number M/U 16950 (cotype - MN) and M/U 16951 (cotype - V)

How to cite: Kampf, A.R., Cámara, F., Ciriotti, M.E., Nash, B.P., Balestra, C. and Chiappino, L. (2015) Castellaroite, IMA 2015-071. CNMNC Newsletter No. 28, December 2015, page 1862; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-077

Fluorwavellite



Silver Coin mine, Valmy, Iron Point district, Humboldt Co., Nevada, USA (40°55'44"N, 117°19'26"W), and Wood mine, 5 miles NE of Del Rio, Cocke Co., Tennessee, USA (35°57'52"N, 82°57'36"W).

Anthony R. Kampf*, Paul M. Adams, Henry Barwood and Barbara P. Nash

*E-mail: akampf@nhm.org

The F analogue of wavellite

Orthorhombic: $Pcnm$; structure determined

$a = 9.6311(4)$, $b = 17.3731(12)$, $c = 6.9946(3)$ Å
8.53(100), 5.65(26), 4.81(17), 3.430(28), 3.223(41),
2.934(15), 2.580(28), 2.101(16)

Cotype material is deposited in the collections of the Mineral Sciences Department, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, California 90007, USA, catalogue numbers 65600 (W) and 65601 (SC)

How to cite: Kampf, A.R., Adams, P.M., Barwood, H. and Nash, B.P. (2015) Fluorwavellite, IMA 2015-077. CNMNC Newsletter No. 28, December 2015, page 1862; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-078

Kyawthuite



Chaung Gyi (Big Stream) valley, 7 km west of Mogok township, Pyin-Oo-Lwin district, Mandalay division, Myanmar (22°43'29"N, 96°01'03"E)

Anthony R. Kampf*, George R. Rossman and Chi Ma

*E-mail: akampf@nhm.org

Isostructural with clinocervantite

Monoclinic: $I2/c$; structure determined

$a = 5.4624(4)$, $b = 4.8852(2)$, $c = 11.8520(8)$ Å,
 $\beta = 101.195(7)^\circ$

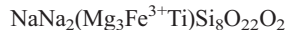
3.266(100), 2.900(66), 2.678(24), 2.437(22),
1.866(21), 1.803(43), 1.626(23), 1.529(28)

Type material is deposited in the collections of the Mineral Sciences Department, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, California 90007, USA, catalogue number 65602

How to cite: Kampf, A.R., Rossman, G.R. and Ma, C. (2015) Kyawthuite, IMA 2015-078. CNMNC Newsletter No. 28, December 2015, page 1863; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-079

Ferri-obertiite



Mount Rothenberg, near Bell/Mendig, Eifel volcanic complex, Rhineland-Palatinate, Germany (50.40°N, 7.23°E)

Roberta Oberti*, Massimo Boiocchi, Frank C. Hawthorne, Neil A. Ball and Günter Blass

*E-mail: oberti@crystal.unipv.it

Amphibole supergroup

Monoclinic: $C2/m$; structure determined

$a = 9.7901(7)$, $b = 17.935(1)$, $c = 5.2892(4)$ Å,
 $\beta = 104.142(2)^\circ$

8.391(72), 3.388(72), 3.260(37), 3.116(76),
2.704(100), 2.583(39), 2.529(67), 2.160(39)

Type material is deposited in the collections of the Museo di Mineralogia, Dipartimento di Scienze della Terra e dell'Ambiente, Università di Pavia, catalogue number 2015-02

How to cite: Oberti, R., Boiocchi, M., Hawthorne, F.C., Ball, N.A. and Blass, G. (2015) Ferri-obertiite, IMA 2015-079. CNMNC Newsletter No. 28, December 2015, page 1863; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-080

Juansilvaite

$\text{Na}_5\text{Al}_3[\text{AsO}_3(\text{OH})]_4[\text{AsO}_2(\text{OH})_2]_2(\text{SO}_4)_2 \cdot 4\text{H}_2\text{O}$
Torrecillas mine, Salar Grande, Iquique Province, Tarapacá Region, Chile (20°58'13"S, 70°8'17"W)

Anthony R. Kampf*, Barbara Nash, Maurizio Dini and Arturo A. Molina Donoso

*E-mail: akampf@nhm.org

New structure type

Monoclinic: $C2/c$; structure determined

$a = 18.177(1)$, $b = 8.6285(5)$, $c = 18.514(1)$ Å,
 $\beta = 90.389(6)^\circ$

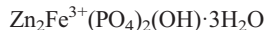
9.25(100), 7.20(34), 4.545(34), 3.988(43),
3.363(42), 3.145(66), 2.960(68), 2.804(33)

Cotype material is deposited in the collections of the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue numbers 65605, 65606, 65607 and 65608

How to cite: Kampf, A.R., Nash, B., Dini, M. and Molina Donoso, A.A. (2015) Juansilvaite, IMA 2015-080. CNMNC Newsletter No. 28, December 2015, page 1863; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-081

Steinmetzite



Cornelia Mine Open Cut, Hagendorf-Süd pegmatite, Hagendorf, Oberpfalz, Bavaria, Germany (49°39'1"N, 12°27'35"E)

Ian E. Grey*, Erich Keck, Anthony R. Kampf, W. Gus Mumme, Colin M. MacRae, Robert W. Gable, A. Matthew Glenn and Cameron J. Davidson

*E-mail: ian.grey@csiro.au

Related to phosphophyllite

Triclinic: $P\bar{1}$; structure determined

$a = 10.438(2)$, $b = 5.102(1)$, $c = 10.546(2)$ Å,
 $\alpha = 91.37(2)$, $\beta = 115.93(2)$, $\gamma = 94.20(2)^\circ$

9.313(65), 5.077(38), 4.726(47), 4.657(100),
3.365(55), 3.071(54), 2.735(48), 2.539(39)

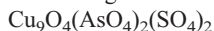
Type material is deposited in the mineralogical collections of the Museum Victoria, Melbourne, Australia, registration number M53510

How to cite: Grey, I.E., Keck, E., Kampf, A.R., Mumme, W.G., MacRae, C.M., Gable, R.W., Glenn, A.M. and Davidson, C.J. (2015)

Steinmetzite, IMA 2015-081. CNMNC Newsletter No. 28, December 2015, page 1863; *Mineralogical Magazine*, **79**, 1859–1864.

IMA No. 2015-083

Vasilseverginite



Arsenatnaya fumarole, Second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption, Tolbachik volcano, Kamchatka Peninsula, Far-Eastern Region, Russia (55°41'N, 160°14'E, 1200 m asl)

Igor V. Pekov*, Sergey N. Britvin, Vasilii O. Yapaskurt, Sergey V. Krivovichev, Marina F. Vigasina and Evgeny G. Sidorov

*E-mail: igorpekov@mail.ru

New structure type

Monoclinic: $P2_1/n$; structure determined

$a = 8.1131(4)$, $b = 9.9182(4)$, $c = 11.0225(5)$ Å,
 $\beta = 110.855(2)^\circ$

7.13(41), 5.99(70), 5.260(100), 4.642(46), 2.821(35), 2.784(38), 2.597(35), 2.556(50)

Type material is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4753/1

How to cite: Pekov, I.V., Britvin, S.N., Yapaskurt, V.O., Krivovichev, S.V., Vigasina, M.F. and Sidorov, E.G. (2015) Vasilseverginite, IMA 2015-083. CNMNC Newsletter No. 28, December 2015, page 1864; *Mineralogical Magazine*, **79**, 1859–1864.

NOMENCLATURE PROPOSALS APPROVED IN NOVEMBER 2015

IMA 15-E: Spelling of names of eight mineral species

Proposal 15-E is accepted, and the spelling of eight mineral names is modified as follows: achavalite becomes achávalite; behierite becomes béhierite; camerolaite becomes camérolaite; fabriesite becomes fabrièsite;

remondite-(Ce) becomes rémondite-(Ce); remondite-(La) becomes rémondite-(La); sénarmontite becomes senarmontite; sérandite becomes serandite.

IMA 15-I: Bafertisite

Proposal 15-I is accepted, and the chemical formula of bafertisite is revised as follows: $\text{Ba}_2\text{Fe}_4^{2+}\text{Ti}_2(\text{Si}_2\text{O}_7)_2\text{O}_2(\text{OH})_2\text{F}_2$, with $Z = 4$. Fe^{2+} is the dominant cation of the O sheet, OH and F are ordered at the X_A^O and X_M^P sites and must be presented as two groups of anions in the mineral formula: $(\text{OH})_2$ and F_2 . The structural data for bafertisite (holotype material) are: triclinic; space group $C\bar{1}$; $a = 10.665(2)$, $b = 13.743(2)$, $c = 11.721(3)$ Å, $\alpha = 90.30(4)$, $\beta = 112.27(2)$, $\gamma = 90.00(3)^\circ$, $V = 1589.8(8)$ Å³.

REVISED CHEMICAL FORMULA

A paper on the mineral benleonardite has been published recently [*Mineralogical Magazine*, **79**, 1213–1221 (2015)] in which the ideal chemical formula of the mineral is given as $\text{Ag}_{15}\text{Cu}(\text{Sb}, \text{As})_2\text{S}_7\text{Te}_4$. In this formula, based on new EPMA and SCXRD data, Cu is present as an essential component, whereas it was lacking in the previously accepted formula of benleonardite. These data were examined carefully by the CNMNC officers and were considered reliable. Accordingly it was agreed to modify the formula of benleonardite in the official IMA List of Minerals.

ERRATUM

IMA No. 2015-035 Oxo-mangani-leakeite

In CNMNC Newsletter 26, the mineral name was typed incorrectly as oxo-mangani-leakite. The correct name is oxo-mangani-leakeite.