



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

Newsletter 71

Ferdinando Bosi, (Chairman, CNMNC – incoming)¹, Ritsuro Miyawaki, (Chairman, CNMNC – outgoing)², Frédéric Hatert, (Vice-Chairman, CNMNC)³, Marco Pasero, (Vice-Chairman, CNMNC)^{4*} and Stuart J. Mills, (Secretary, CNMNC)⁵

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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 (ideal formula)

Mineral symbol

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 powder X-ray 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 DECEMBER 2022

IMA No. 2020-040

Fabritzite



Fbz

Hilarion mine (between 3rd and 4th level), Kamariza area, Agios Konstantinos, Lavreotiki, East Attica, Greece

Uwe Kolitsch*, Branko Rieck, Dan Topa, Gerald Giester and Manuela Zeug

*E-mail: uwe.kolitsch@nhm-wien.ac.at

Closely related to gordaite

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

$a = 8.275(1)$, $c = 32.000(6)$ Å

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Cite this article: Bosi F., Miyawaki R., Hatert F., Pasero M. and Mills S.J. (2023) Newsletter 71. *Mineralogical Magazine* 87, 332–335. <https://doi.org/10.1180/mgm.2023.11>

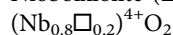
10.667(100), 5.333(13), 4.138(10), 3.854(10), 2.699(10), 2.566(19), 2.330(8), 1.564(8)

Cotype material is deposited in the collections of the Natural History Museum, Burgring 7, A-1010 Wien, Austria, catalogue number O 356 (three specimens)

How to cite: Kolitsch, U., Rieck, B., Topa, D., Giester, G. and Zeug, M. (2023) Fabritzite, IMA 2020-040. CNMNC Newsletter 71; *Mineralogical Magazine*, 87, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2021-002a

Nioboixiolite-(□)



Nbix-□

Bayan Obo mine, Inner Mongolia region, China (41°47'25" N, 109°50'00" E)

Yike Li, Changhui Ke, Denghong Wang, Zhenyu Chen, Guowu Li, Anjian Wang, Ruiping Li, Le Hu, Hong Yu and Yonggang Zhao

*E-mail: like430@cags.ac.cn

Columbite supergroup

Orthorhombic: $Pbcn$; structure determined

$a = 4.7071(5)$, $b = 5.7097(7)$, $c = 5.1111(6)$ Å

3.662(20), 2.975(100), 2.566(10), 2.501(20), 2.096(10), 1.770(20), 1.718(15), 1.458(20)

Type material is deposited in the collections of the Geological Museum of China, Yangrou Hutong No. 15, Xisi, Beijing 100083, People's Republic of China, catalogue number M16118

How to cite: Li, Y., Ke, C., Wang, D., Chen, Z., Li, G., Wang, A., Li, R., Hu, L., Yu, H. and Zhao, Y. (2023) Nioboixiolite-(□), IMA 2021-002a. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2022-076

Andrieslombaardite

RhSbS

Alo

Onverwacht platinum pipe, Limpopo Province, South Africa (24°39'9.04" S, 30°09'59.57" E)

Louis J. Cabri*, Andrew M. McDonald, Thomas Oberthür, Nobumichi Tamura, Anna Vymazalová, Kirk C. Ross and Frank Melcher

*E-mail: lcabri@outlook.com

Cobaltite group

Cubic: $P2_13$

$a = 6.0278(4)$ Å

4.262(40), 3.014(63), 2.695(96), 2.461(59), 2.131(39), 1.817(100), 1.672(29), 1.611(32)

Type material is deposited in the collections of the Canadian Museum of Nature, 240 McLeod St, Ottawa, ON K2P 2R1, Canada, catalogue number CMNMC 90353

How to cite: Cabri, L.J., McDonald, A.M., Oberthür, T., Tamura, N., Vymazalová, A., Ross, K.C. and Melcher, F. (2023) Andrieslombaardite, IMA 2022-076. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2022-093

Fluoralforsite

Ba₅(PO₄)₃F

Fafr

Hatrurim Basin (Negev Desert), Hatrurim Complex, Israel

Arkadiusz Krz̄ała*, Katarzyna Nowak, Georgia Cametti, Irina Galuskina, Yevgeny Vapnik and Evgeny Galuskin

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Apatite supergroup

Hexagonal: $P6_3/m$; structure determined

$a = 9.9981(1)$, $c = 7.5323(1)$ Å

3.776(20), 3.454(32), 3.273(35), 3.008(76), 3.002(100), 2.886(47), 2.083(29), 1.992(29)

Type material is deposited in the collections of the Natural History Museum, Bernstrasse 15, CH-3005 Bern, Switzerland, catalogue number 44951

How to cite: Krz̄ała, A., Nowak, K., Cametti, G., Galuskina, I., Vapnik, Y. and Galuskin, E. (2023) Fluoralforsite, IMA 2022-093. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2022-094

Tzeferisite

CaZn₈(SO₄)₂(OH)₁₂Cl₂(H₂O)₉

Tze

Ary Mine, Dimoliaki mines, Dimoliaki, Lavrion Mining District, Lavreotiki, Attica, Greece

Branko Rieck*, Irene Liebhart, Gerald Giester, Eugen Libowitzky, N. Chutimun Chanmuang and Uwe Kolitsch

*E-mail: rieckb49@univie.ac.at

Known synthetic (anthropogenic) analogue

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

$a = 8.3693(12)$, $c = 67.7943(1)$ Å

11.31(100), 5.655(40), 4.186(20), 4.030(20), 3.365(30), 3.073(20), 2.732(30), 2.504(35)

Type material is deposited in the collections of the Natural History Museum, Burgring 7, 1010 Wien, Austria, catalogue number O2549

How to cite: Rieck, B., Liebhart, I., Giester, G., Libowitzky, E., Chanmuang, N.C. and Kolitsch, U. (2023) Tzeferisite, IMA 2022-094. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2022-095

Plumbogaidonnayite

PbZrSi₃O₉·2H₂O

Pgdn

Saima peralkaline complex, about 50 km northeast of Fengcheng City, Liaoning Province, China (40°58'20.6" N, 124°16'27.8" E)

Bin Wu, Xiang-ping Gu*, Can Rao, Rucheng Wang, Xing-qing Xing, Jian-jun Wan and Fu-jun Zhong

*E-mail: guxp2004@163.com

Gaidonnayite group

Orthorhombic: $P2_1nb$; structure determined

$a = 11.7690(4)$, $b = 12.9867(3)$, $c = 6.6616(2)$ Å

6.489(36), 5.803(100), 4.661(27), 4.336(29), 3.640(30), 3.114(79), 2.947(27), 2.622(27)

Type material is deposited in the collections of the Geological Museum of China, No. 16 Yangrou Hutong, Xisi, Beijing 100031, People's Republic of China, catalogue number M16139

How to cite: Wu, B., Gu, X., Rao, C., Wang, R., Xing, X., Wan, J. and Zhong, F. (2023) Plumbogaidonnayite, IMA 2022-095. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2022-096

Okruginite

Cu₂SnSe₃

Okg

Ozernovskoe Au deposit, Kamchatka peninsula, Russia (57°35'36" N, 160°50'60" E)

Anna Vymazalová*, Vladimir V. Kozlov, František Laufek, Chris J. Stanley and Ilya A. Shkilev

*E-mail: anna.vymazalova@geology.cz

Chemically, the Se analogue of mohite

Monoclinic: Cc ; structure determined

$a = 6.9906(2)$, $b = 12.0712(3)$, $c = 6.9723(2)$ Å, $\beta = 109.353(10)^\circ$
3.298 (54), 3.289(53), 3.286(100), 2.018(23), 2.016(46), 2.013(50), 2.012(24), 1.717(15)

Type material is deposited in the collections of the Department of Earth Sciences, Natural History Museum, London SW7 5BD, United Kingdom, catalogue number BM 2021,02

How to cite: Vymazalová, A., Kozlov, V.V., Laufek, F., Stanley, C.J. and Shkilev, I.A. (2023) Okruginite, IMA 2022-096. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>.

IMA No. **2022-097**

Manuelarossiite

PbCaAlF₇

Mnrs

From a fumarole after the 1944 eruption of the Vesuvius volcano, Naples province, Campania, Italy

Fabrizio Nestola, Anatoly V. Kasatkin*, Cristian Biagioni, Radek Škoda, Lisa Santello and Atali A. Agakhanov

*E-mail: anatoly.kasatkin@gmail.com

Chemically and structurally related to calcioaravaipaite

Monoclinic: *C2/m*; structure determined

$a = 7.6754(3)$, $b = 7.4443(4)$, $c = 9.2870(5)$ Å, $\beta = 93.928(5)^\circ$
9.265(78), 4.532(79), 3.722(74), 3.627(100), 3.584(81), 3.454(83), 3.419(96), 2.669(55)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Leninskiy Prospekt 18-2, Moscow 119071, Russia, registration number 5920/1

How to cite: Nestola, F., Kasatkin, A.V., Biagioni, C., Škoda, R., Santello, L. and Agakhanov, A.A. (2023) Manuelarossiite, IMA 2022-097. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. **2022-100**

Olsenite

KFe₄(PO₄)₃

Ose

El Ali meteorite, found in 2020 close to Hiiraan, Somalia

Chi Ma*, Christopher D.K. Herd and Andrew J. Locock

*E-mail: chima@caltech.edu

New structure type

Orthorhombic: *Pnmm*

$a = 9.81(1)$, $b = 16.51(1)$, $c = 6.27(1)$ Å
8.255 (100), 5.861(69), 3.804(32), 3.158(69), 3.040(64), 2.922(30), 2.642(59), 2.516(71)

Type material is deposited in the meteorite collections of the Department of Earth and Atmospheric Sciences, University of Alberta, 1-26 Earth Sciences Building, Edmonton, Alberta, T6G 2E3, Canada, accession number MET11814

How to cite: Ma, C., Herd, C.D.K. and Locock, A.J. (2023) Olsenite, IMA 2022-100. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. **2022-101**

Ezochiite

Cu⁺(Rh³⁺Pt⁴⁺)S₄

Ezo

Near the sea shore, Tomamae town, Hokkaido, Japan (44°17'09" N, 141°38'58" E)

Daisuke Nishio-Hamane* and Katsuyuki Saito

*E-mail: hamane@issp.u-tokyo.ac.jp

Thiospinel group

Cubic: *Fd3m*

$a = 9.865(4)$ Å
2.96(98), 2.45(76), 2.25(44), 1.897(100), 1.505(22), 1.487(20), 1.382(25), 1.284(37)

Type material is deposited in the collections of the National Museum of Nature and Science, 4-1-1 Amakubo, Tsukuba 305-0005, Japan, specimen number NSM-M49764

How to cite: Nishio-Hamane, D. and Saito, K. (2023) Ezochiite, IMA 2022-101. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. **2022-102**

Mikenewite

Mn²⁺(S⁴⁺O₃)·3H₂O

Mnw

San Judas Chimney, Ojuela mine, Mapimí, Durango, Mexico (25°47'36" N, 103°47'27" W)

Hexiong Yang*, Robert A. Jenkins, James A. McGlasson, Ronald B. Gibbs and Robert T. Downs

*E-mail: hyang@arizona.edu

A dimorph of gravegliaite, and the Mn²⁺ analogue of albertiniite

Monoclinic: *P2₁/n*; structure determined

$a = 6.6390(3)$, $b = 8.8895(4)$, $c = 8.7900(4)$ Å, $\beta = 96.095(2)^\circ$
5.547(42), 4.707(100), 4.367(38), 3.947(49), 3.924(49), 3.327(60), 3.097(45), 2.774(57)

Type material is deposited in the collections of the University of Arizona Alfie Norville Gem and Mineral Museum, 115 N Church Ave Ste 121, Tucson, AZ 85701, USA, catalogue no. 22724 (holotype), and the RRUFF Project, deposition no. R210021 (cotype)

How to cite: Yang, H., Jenkins, R.A., McGlasson, J.A., Gibbs, R.B. and Downs, R.T. (2023) Mikenewite, IMA 2022-102. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

NEW MINERAL PROPOSALS APPROVED IN JANUARY 2023

IMA No. **2022-104**

Hokkaidoite

C₂₂H₁₂

Hkd

Shikaribetsu area, Kita-urimaku, Shikaoi-cho, Kato-gun, Hokkaido, Japan (43°16' N, 143°05' E – type locality); Aibetsu mercury mine, Asahiyama, Aibetsu-cho, Kamikawa-gun, Hokkaido, Japan (43°56'00" N, 142°44'00" E – cotype locality)
Ryoji Tanaka*, Akihito Hagiwara, Takashi Ishibashi and Yuki Inoue

*E-mail: polysilane@gmail.com

Known synthetic analogue

Monoclinic: *P2₁/c*; structure determined

$a = 9.8422(9)$, $b = 11.866(5)$, $c = 11.722(2)$ Å, $\beta = 98.76(1)^\circ$
9.855(100), 8.348(34), 6.710(11), 5.346(15), 4.156(24), 3.978(13), 3.608(11), 3.191(11)

Type material is deposited in the collections of the National Museum of Nature and Science, 4-1-1 Amakubo, Tsukuba 305-0005, Japan, registration number NMS-M49763 (holotype) and NMS-M49765 (cotype)

How to cite: Tanaka, R., Hagiwara, A., Ishibashi, T. and Inoue, Y. (2023) Hokkaidoite, IMA 2022-104. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. **2022-105**

Nacareniobsite-(Y)

Na₃Ca₃YNb(Si₂O₇)₂OF₃

Nns-Y

Darai-Pioz alkaline massif, upper reaches of the Darai-Pioz River, Tajikistan (39°30' N, 70°40' E)

Atali A. Agakhanov*, Maxwell C. Day, Elena Sokolova, Vladimir Y. Karpenko, Frank C. Hawthorne, Leonid A. Pautov, Igor V. Pekov, Anatoly V. Kasatkin and Vitaliya A. Agakhanova

*E-mail: atali99@mail.ru

Seidozerite supergroup

Monoclinic: $P2_1/c$; structure determined

$a = 7.408(3)$, $b = 5.665(2)$, $c = 18.82(2)$ Å, $\beta = 101.37(5)^\circ$

$5.44(31)$, $3.591(26)$, $3.068(100)$, $2.944(45)$, $2.801(23)$, $2.707(32)$, $2.023(25)$, $1.853(29)$

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Leninskiy Prospekt 18-2, Moscow 119071, Russia, registration number 5488/1

How to cite: Agakhanov, A.A., Day, M.C., Sokolova, E., Karpenko, V.Y., Hawthorne, F.C., Pautov, L.A., Pekov, I.V., Kasatkin, A.V. and Agakhanova, V.A. (2023) Nacarenioibsite-(Y), IMA 2022-105. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2022-107

Wortupaite

$\text{MgNi}_2^{2+}(\text{Te}^{4+}\text{O}_3)_3 \cdot 3\text{H}_2\text{O}$

Wor

Wortupa gold mine, 12 km north-north-east of Balcanoona Station, Flinders Ranges, South Australia, Australia (30°26'06" S, 139°14'29" E)

Owen P. Missen*, Stuart J. Mills, Joel Brugger, William D. Birch and Peter Elliott

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

Structurally related to zemannite

Hexagonal: $P6_3/m$; structure determined

$a = 9.221(1)$, $c = 7.515(1)$ Å

$8.059(93)$, $4.034(92)$, $2.832(43)$, $2.769(100)$, $2.332(30)$, $1.920(45)$, $1.782(22)$, $1.718(39)$

Type material is deposited in the collections of the Museums Victoria, PO Box 666, Melbourne, Victoria 3001, Australia, specimen number M2021

How to cite: Missen, O.P., Mills, S.J., Brugger, J., Birch, W.D. and Elliott, P. (2023) Wortupaite, IMA 2022-107. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2022-110

Ginelfite

$\text{Ag}_2(\text{Ag}_{0.5}\text{Fe}_{0.5}^{2+})\text{TlPb}_{23.5}(\text{Sb,As})_{33.5}\text{S}_{76}$

GlF

Jas Roux, La Chapelle-en-Valgaudemar, Gap, Hautes-Alpes, Provence-Alpes-Côte d'Azur, France (44°44'45" N, 6°19'18" E)

Cristian Biagioni*, Jiří Sejkora, Yves Moëlo, Georges Favreau, Vincent Bourgoïn, Jean-Claude Boulliard, Elena Bonaccorsi,

Daniela Mauro, Silvia Musetti, Marco Pasero, Natale Perchiazzi and Jana Ulmanová

*E-mail: cristian.biagioni@unipi.it

New structure type

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

$a = 8.3692(7)$, $b = 27.540(2)$, $c = 29.177(2)$ Å, $\alpha = 95.455(3)$, $\beta = 93.852(3)$, $\gamma = 94.132(3)^\circ$

$4.168(w)$, $3.413(s)$, $2.965(s)$, $2.805(ms)$, $2.729(ms)$, $2.091(vs)$, $1.872(ms)$, $1.785(ms)$

Type material is deposited in the collections of the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 20023, and the Department of Mineralogy and Petrology, National Museum, Cirkusová 1740, 193 00 Prague 9, Czech Republic, catalogue number PIP 31/2022

How to cite: Biagioni, C., Sejkora, J., Moëlo, Y., Favreau, G., Bourgoïn, V., Boulliard, J.-C., Bonaccorsi, E., Mauro, D., Musetti, S., Pasero, M., Perchiazzi, N. and Ulmanová, J. (2023) Ginelfite, IMA 2022-110. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

IMA No. 2022-111

Wangpuite

$\text{K}_3(\text{PO}_4)(\text{Mo}_{12}\text{O}_{36})$

Wpu

Freedom #2 mine, Central Mining Area, about 5.6 km north-northeast of the town of Marysvale, Plute Co., Utah, USA (38°29'43" N, 112°12'55" W)

Xiangping Gu*, Hexiong Yang, Joe Marty, Ronald B. Gibbs and Mingyue He

*E-mail: guxp2004@163.com

Known synthetic analogue

Cubic: $Pn\bar{3}m$; structure determined

$a = 11.6148(1)$ Å

$8.208(34)$, $4.736(13)$, $3.348(100)$, $2.902(30)$, $2.474(14)$, $2.277(12)$, $2.053(13)$, $1.643(12)$

Type material is deposited in the collections of the University of Arizona Alfie Norville Gem and Mineral Museum, 115 N Church Ave Ste 121, Tucson, AZ 85701, USA, catalogue no. 22726 (holotype), and the RRUFF Project, deposition no. R220030 (cotype)

How to cite: Gu, X., Yang, H., Marty, J., Gibbs, R.B. and He, M. (2023) Wangpuite, IMA 2022-111. CNMNC Newsletter 71; *Mineralogical Magazine*, **87**, <https://doi.org/10.1180/mgm.2023.11>

NOMENCLATURE/CLASSIFICATION PROPOSALS APPROVED IN DECEMBER 2022

Akrochordite group

The akrochordite group is established. It consists of three mineral species: akrochordite, $\text{MnMn}_2\text{Mn}_2(\text{AsO}_4)_2(\text{OH})_4(\text{H}_2\text{O})_4$, guana-coite, $\text{MgCu}_2\text{Mg}_2(\text{AsO}_4)_2(\text{OH})_4(\text{H}_2\text{O})_4$, and vargite, $\text{MnCu}_2\text{Mn}_2(\text{AsO}_4)_2(\text{OH})_4(\text{H}_2\text{O})_4$.