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

Newsletter 70

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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 OCTOBER 2022

IMA No. **2018-146a**
Borzęckiite
$Pb(UO_2)_3(SeO_3)_2O_2{\cdot}3H_2O$
Bzc
On dumps near the No. 16 shaft of the Miedzianka mine, Miedzianka village, Janowice Wielkie commune, Jelenia Góra District, Lower Silesia, Poland (50°52'42" N, 15°56'25" E)
Rafał Siuda, Łukasz Kruszewski and Travis A. Olds*
*E-mail: oldst@carnegiemnh.org
Structurally related to marthozite, guilleminite and larisaite
Orthorhombic: $P2_1nm$; structure determined
$a = 7.00(2)$, $b = 7.13(1)$, $c = 17.10(4)$ Å
8.545(72), 7.101(100), 3.503(48), 3.145(31), 3.064(38), 1.955 (30), 1.765(19), 1.298(15)
Type material is deposited in the collections of the S.J. Thugutt Geological Museum, Faculty of Geology, University of Warsaw, ul. Żwirki i Wigury 93, 02-089 Warsaw, Poland, catalogue number MWG UW 009763
How to cite: Siuda, R., Kruszewski, Ł. and Olds, T.A. (2023) Borzęckiite, IMA 2018-46a. CNMNC Newsletter 70; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2021-050a**
Nioboixiolite-(Mn^{2+})
$(Nb_{0.67}Mn^{2+}_{0.33})O_2$
Nbix-Mn
Sosedka granitic pegmatite vein, Malkhan pegmatite field, Krasnochikoisky District, Zabaikalsky Krai, Siberia, Russia (50°39'06" N, 109°53'14" E)
Nikita V. Chukanov*, Igor V. Pekov, Natalia V. Zubkova, Vasiliy O. Yapaskurt, Yulia S. Shelukhina, Sergey N. Britvin and Dmitry Y. Pushcharovsky
*E-mail: nikchukanov@yandex.ru

***Author for correspondence:** Marco Pasero, Email: marco.pasero@unipi.it
Cite this article: Miyawaki R., Hatert F., Pasero M. and Mills S.J. (2023) Newsletter 70. *Mineralogical Magazine* **87**, 160–168. https://doi.org/10.1180/mgm.2022.135

The Nb-dominant analogue of ixiolite-(Mn^{2+})
Orthorhombic: *Pbcn*; structure determined
a = 4.7559(5), b = 5.7318(5), c = 5.1344(4) Å
3.662(29), 2.984(100), 2.505(21), 1.775(21), 1.748(28), 1.726 (35), 1.553(20), 1.463(30)
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 5721/1
How to cite: Chukanov, N.V., Pekov, I.V., Zubkova, N.V., Yapaskurt, V.O., Shelukhina, Y.S., Britvin, S.N. and Pushcharovsky, D.Y. (2023) Nioboixiolite-(Mn^{2+}), IMA 2021-050a. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-035**
Ikorskyite
$KMn^{3+}(Si_4O_{10})\cdot 3H_2O$
Iko
Kirov underground mine (horizon +252 m), Mt. Kukisvumchorr, Khibiny massif, Kola peninsula, Russia (67°40' N, 33°43' E)
Victor N. Yakovenchuk, Taras L. Panikorovskii, Nataliya G. Konoplyova, Yakov A. Pakhomovsky, Eugeny E. Savchenko, Julia A. Mikhailova, Vladimir N. Bocharov, Dar'ya V. Spiridonova and Sergey V. Krivovichev
*E-mail: skrivovi@mail.ru
New structure type
Monoclinic: $P2_1/c$; structure determined
a = 5.0339(4), b = 8.2329(7), c = 13.3484(10) Å, β = 93.953(7)°
7.04(55), 4.318(41), 4.185(100), 3.956(24), 3.339(28), 3.095(19), 3.014(30), 2.939(70)
Type material is deposited in the collections of the Mineralogical Museum, St. Petersburg State University, 7-9 Universitetskaya Emb., St. Petersburg 199034, Russia, catalogue number 1/19651, and the Geological and the Mineralogical Museum, Kola Science Centre of Russian Academy of Sciences, 14 Fersman Street, Apatity 184200, Russia, catalogue number 7538
How to cite: Yakovenchuk, V.N., Panikorovskii, T.L., Konoplyova, N.G., Pakhomovsky, Y.A., Savchenko, E.E., Mikhailova, J.A., Bocharov, V.N., Spiridonova, D.V. and Krivovichev, S.V. (2023) Ikorskyite, IMA 2022-035. CNMNC Newsletter 69; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-055**
Monazite-(Gd)
$Gd(PO_4)$
Mnz-Gd
Zimná Voda REE-U-Au vein, Prakovce, Gelnica District, Košice Region, Slovakia (48°46'00" N, 20°54'48" E)
Martin Ondrejka*, Pavel Uher, Štefan Ferenc, Juraj Majzlan, Kilian Pollok, Stanislava Milovská, Tomáš Mikuš, Alexandra Molnárová, Radek Škoda, Richard Kopáčik, Ľubomír Orovčík and Peter Bačík
*E-mail: martin.ondrejka@uniba.sk
Monazite group
Monoclinic: $P2_1/n$
a = 6.703(1), b = 6.914(1), c = 6.383(1) Å, β = 103.8(1)°
3.450(32), 3.227(68), 3.024(100), 2.804(48), 2.394(54), 2.335 (25), 2.140(24), 1.833(28)
Type material is deposited in the collections of the Department of Mineralogy, Petrology and Economic Geology, Comenius University, Ilkovičova 6, 842 15, Bratislava, Slovakia, catalogue number MMUK7660
How to cite: Ondrejka, M., Uher, P., Ferenc, Š., Majzlan, J., Pollok, K., Milovská, S., Mikuš, T., Molnárová, A., Škoda, R., Kopáčik, R., Orovčík, L. and Bačík, P. (2023) Monazite-(Gd), IMA 2022-055. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-057**
Bernardevansite
$Al_2(SeO_3)_3\cdot 6H_2O$
Bev
El Dragón mine, Antonio Quijarro Province, Potosí Department, Bolivia (19°49'15" S, 65°55'00" W)
Hexiong Yang*, Xiangping Gu, Robert A. Jenkins, Ronald B. Gibbs and Robert T. Downs
*E-mail: hyang@arizona.edu
A dimorph of alfredopetrovite
Monoclinic: $P2_1/c$; structure determined
a = 16.5016(5), b = 7.7703(2), c = 9.8524(3) Å, β = 98.258(3)°
8.147(39), 7.036(100), 3.515(64), 3.385(47), 3.013(29), 2.943 (80), 2.769(37), 2.247(20)
Type material is deposited in the collections of the University of Arizona Alfie Norville Gem & Mineral Museum, 115 N Church Ave Ste 121, Tucson, AZ 85701, USA, catalogue # 22712 (holotype), and the RRUFF Project, deposition # R210010 (cotype)
How to cite: Yang, H., Gu, X., Jenkins, R.A., Gibbs, R.G. and Downs, R.T. (2023) Bernardevansite, IMA 2022-057. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-058**
Driekopite
PtBi
Dkp
Driekop mine, eastern limb of the Bushveld complex, South Africa (24°32'43.04" S, 30°06'06.94" E)
Andrew M. McDonald*, Nobumichi Tamura, Louis J. Cabri and Frank Melcher
*E-mail: amcdonald@laurentian.ca
The Pt analogue of sobolevskite, and the Bi analogue of stumpflite
Hexagonal: $P6_3/mmc$; structure determined
a = 4.1993(5), c = 5.6194(6) Å
3.637(17), 3.053(92), 2.223(100), 2.010(77), 1.730(17), 1.527 (28), 1.235(24), 1.168(18)
Type material is deposited in the collections of the Canadian Museum of Nature, 1740 Pink Road, Gatineau, QC, Canada, catalogue number CMNMC 90261
How to cite: McDonald, A.M., Tamura, N., Cabri, L.J. and Melcher, F. (2023) Driekopite, IMA 2022-058. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-059**
Alumolukrahnite
$CaCu^{2+}Al(AsO_4)_2(OH)(H_2O)$
Alkr

Jote mine, Pampa Larga district, Tierra Amarilla, Copiapó Province, Atacama Region, Chile (27°36'30" S, 70°09'23" W)
Anthony R. Kampf*, Stuart J. Mills, Barbara Nash, Maurizio Dini and Arturo A. Molina Donoso
*E-mail: akampf@nhm.org
Tsumcorite group
Triclinic: $P\overline{1}$; structure determined
$a = 5.343(5)$, $b = 5.501(5)$, $c = 7.329(5)$ Å, $\alpha = 67.72(2)$, $\beta = 69.06(2)$, $\gamma = 69.42(2)°$
4.89(86), 3.396(100), 3.196(70), 3.115(70), 2.882(90), 2.714(52), 2.488(82), 1.694(65)
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 76256, 76257 and 76258
How to cite: Kampf, A.R., Mills, S.J., Nash, B., Dini, M. and Molina Donoso, A.A. (2023) Alumolukrahnite, IMA 2022-059. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-060**
Liangjunite
$K_2(Mo_2O_5)(SO_4)_2 \cdot 3H_2O$
Lju
Freedom #2 mine, about 5.6 km NNE of the town of Marysvale, central part of the Marysvale volcanic field, Piute Co., Utah, USA (38°29'43" N, 112°12'55" W)
Xiangping Gu*, Hexiong Yang and Michael M. Scott
*E-mail: guxp2004@163.com
Isostructural with bouškaite
Triclinic: $P\overline{1}$; structure determined
$a = 5.48124(8)$, $b = 9.5360(2)$, $c = 14.1235(2)$ Å, $\alpha = 97.401(1)$, $\beta = 99.906(1)$, $\gamma = 90.080(1)°$
13.87(00), 6.921(41), 5.379(98), 4.760(56), 3.936(46), 3.468(57), 3.166(49), 3.000(71)
Type material is deposited in the collections of the University of Arizona Alfie Norville Gem & Mineral Museum, 115 N Church Ave Ste 121, Tucson, AZ 85701, USA, catalogue # 22719 (holotype), and the RRUFF Project, deposition # R220001 (cotype)
How to cite: Gu, X., Yang, H. and Scott, M.M. (2023) Liangjunite, IMA 2022-060. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-061**
Cuprodobrovolskyite
$Na_4Cu(SO_4)_3$
Cdvo
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 a.s.l.)
Nadezhda V. Shchipalkina*, Igor V. Pekov, Natalia N. Koshlyakova, Dmitry I. Belakovskiy, Natalia V. Zubkova, Atali A. Agakhanov, Sergey N. Britvin and Maria A. Nazarova
*E-mail: estel58@yandex.ru
The Cu-dominant analogue of dobrovolskyite
Trigonal: $R3$; structure determined
$a = 15.702(2$, $c = 22.017(2)$ Å
11.66(38), 7.28(33), 3.859(100), 3.702(36), 3.674(39), 3.086(46), 2.853(99), 2.615(68)
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 5881/1
How to cite: Shchipalkina, N.V., Pekov, I.V., Koshlyakova, N.N., Belakovskiy, D.I., Zubkova, N.V., Agakhanov, A.A., Britvin, S.N. and Nazarova, M.A. (2023) Cuprodobrovolskyite, IMA 2022-061. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-063**
Chenowethite
$Mg(H_2O)_6[(UO_2)_2(SO_4)_2(OH)_2] \cdot 5H_2O$
Chw
Blue Lizard mine, White Canyon mining district, San Juan Co., Utah, USA (37°33'26" N, 110°17'44" W – type locality); Green Lizard Mine, White Canyon mining district, San Juan Co., Utah, USA (37°34'37.10" N, 110°17'52.80" W – co-type locality)
Anthony R. Kampf*, Jakub Plášil, Travis A. Olds, Chi Ma and Joe Marty
*E-mail: akampf@nhm.org
Structurally related to deliensite
Orthorhombic: *Cmcm*; structure determined
$a = 6.9435(6)$, $b = 19.035(2)$, $c = 16.358(1)$ Å
9.54(100), 6.07(80), 4.712(54), 4.535(34), 3.476(41), 3.259(28), 2.928(27), 2.650(32)
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 76259 and 76260 (Blue Lizard), and 76261 and 76262 (Green Lizard)
How to cite: Kampf, A.R., Plášil, J., Olds, T.A., Ma, C. and Marty, J. (2023) Chenowethite, IMA 2022-063. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-064**
Antipovite
$Cu_5O_2(PO_4)_2$
Antp
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 a.s.l.)
Oleg I. Siidra*, Evgeny V. Nazarchuk, Leonid A. Pautov, Artem S. Borisov and Mirak A. Mirakov
*E-mail: o.siidra@spbu.ru
Known synthetic analogue
Triclinic: $P\overline{1}$; structure determined
$a = 5.2703(2)$, $b = 5.3020(3)$, $c = 7.6883(4)$ Å, $\alpha = 97.342(4)$, $\beta = 90.441(4)$, $\gamma = 111.361(4)°$
3.902(31), 3.667(34), 3.095(100), 2.974(52), 2.653(87), 2.610 (34), 2.540(21), 2380(16)
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 5884/1
How to cite: Siidra, O.I., Nazarchuk, E.V., Pautov, L.A., Borisov, A.S. and Mirakov, M.A. (2023) Antipovite, IMA 2022-064. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

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IMA No. **2022-065**
Asagiite
$NiCu_4(SO_4)_2(OH)_6{\cdot}6H_2O$
Asa
Nakauri mine, Nakauri, Shinshiro city, Mikawa Province, Aichi Prefecture, Japan (34°51'05" N, 137°32'09" E)
Daisuke Nishio-Hamane*, Takeshi Yajima, Norimasa Shimobayashi, Masayuki Ohnishi and Takefumi Niwa
*E- mail: hamane@issp.u-tokyo.ac.jp
The Ni analogue of ktenasite
Monoclinic: $P2_1/c$; structure determined
$a = 5.6095(8)$, $b = 6.1259(7)$, $c = 23.758(3)$ Å, $\beta = 95.288(4)°$
11.83(100), 5.912(64), 4.845(55), 3.920(45), 2.953(33), 2.668 (57), 2.571(36), 2.142(33)
Type material is deposited in the collections of the National Museum of Nature and Science, Amakubo, Tsukuba, Ibaraki 305-0005, Japan, specimen number NSM-M49723
How to cite: Nisio-Hamane, D., Yajima, T., Shimobayashi, N., Ohnishi, M. and Niwa, T. (2023) Asagiite, IMA 2022-065. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-066**
Ruizhongite
$(Ag_2\square)Pb_3Ge_2S_8$
Rzh
Wusihe Pb-Zn deposit, Hanyuan County, Sichuan Province, China (29°16'27.0" N, 102°53'23.0" E)
Yumiao Meng and Xiangping Gu*
*E- mail: guxp2004@163.com
New structure type
Cubic: $I\bar{4}3d$; structure determined
$a = 14.0559(2)$ Å
3.755(100), 3.511(76), 2.992(73), 2.482(79), 2.276(46), 2.075 (24), 1.784(39), 1.680(25)
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 M16138
How to cite: Meng, Y. and Gu, X. (2023) Ruizhongite, IMA 2022-066. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-067**
Novikovite
$(NH_4)_4(Mo_2^{6+}Mo_2^{5+})_4O_8(SO_4)_5$
Nvi
Near Ravat kishlak (village), about 100 km north of Dushanbe, Kuhi-Malik area, Fan-Jagnob lignite basin, Tajikistan (39° 11'02" N, 68°35'11" E)
Leonid A. Pautov, Mirak A. Mirakov, Oleg I. Siidra*, Nikita V. Chukanov, Artem S. Borisov, Vladimir Y. Karpenko, Pavel Y. Plechov and Saimudasir Makhmadsharif
*E- mail: o.siidra@spbu.ru
New structure type
Monoclinic: $P2_1/n$; structure determined
$a = 8.936(2)$, $b = 13.210(3)$, $c = 22.555(5)$ Å, $\beta = 94.484(4)°$
11.39(51), 8.54(40), 8.46(100), 6.49(20), 6.34(40), 5.70(41), 4.28 (23), 3.468(20)
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 5886/1
How to cite: Pautov, L.A., Mirakov, M.A., Siidra, O.I., Chukanov, N.V., Borisov, A.S., Karpenko, V.Y., Plechov, P.Y. and Makhmadsharif, S. (2023) Novikovite, IMA 2022-067. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-068**
Pengite
$(Pb_8Sb_3^{3+})_{\Sigma 11}Sb_9^{5+}O_{35}$
Peg
Wuxu ore field, Nandan-Hechi metallogenic belt, Guangxi, China (23° N, 108° E)
Guowu Li*, Ningyue Sun, Qi Lu, Yuan Xue, Zhesheng Ma, Nicheng Shi, Jinhua Hao and Junjia Fan
*E-mail: liguowu@cugb.edu.cn
Structurally related to pyrochlore supergroup minerals
Trigonal: $R\bar{3}m$; structure determined
$a = 7.3651(3)$, $c = 48.346(2)$ Å
3.236(43), 3.039(100), 2.669(55), 1.932(18), 1.846(21), 1.604 (13), 1.578(11), 1.518(12)
Type material is deposited in the collections of the Geological Museum of China, Yangrou Hutong No. 15, Xisi, Xicheng District, Beijing 100031, People's Republic of China, catalogue number M16137 (holotype), and the Crystal Structure Laboratory, China University of Geosciences, Beijing 100083, People's Republic of China, catalogue number Hc-1 (cotype)
How to cite: Li, G., Sun, N., Lu, Q., Xue, Y., Ma, Z., Shi, N., Hao, J. and Fan, J. (2023) Pengite, IMA 2022-068. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-069**
Ferro-bosiite
$NaFe_3^{3+}(Al_4Fe_2^{2+})(Si_6O_{18})(BO_3)_3(OH)_3O$
Fbos
"Marina" granitic pegmatite, Mavuco, Alto Ligoña, Nampula Province, Mozambique (15°54'16" S, 39°02'56" E)
Ferdinando Bosi*, Alessandra Altieri, Henrik Skobgy, Federico Pezzotta, Ulf Hålenius, Gioacchino Tempesta, Paolo Ballirano, Tomáš Flégr and Jan Cempírek
*E-mail: ferdinando.bosi@uniroma1.it
Tourmaline supergroup
Trigonal: $R3m$; structure determined
$a = 16.0499(5)$, $c = 7.2977(2)$ Å
6.461(51), 4.264(48), 4.012(62), 3.529(46), 2.997(59), 2.598 (100), 2.060(41), 1.937(23)
Type material is deposited in the collections of the Museo Universitario di Scienze della Terra, Dipartimento di Scienze della Terra, Sapienza Università di Roma, Piazzale Aldo Moro 5, I-00185 Roma, Italy, catalogue number 33308/405
How to cite: Bosi, F., Altieri, A., Skobgy, H., Pezzotta, F., Hålenius, U., Tempesta, G., Ballirano, P., Flégr, T. and Cempírek, J. (2023) Ferro-bosiite, IMA 2022-069. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-070**
Zincorietveldite
$Zn(UO_2)(SO_4)_2(H_2O)_5$
Zrvd
Blue Lizard mine, Red Canyon, White Canyon district, San Juan Co., Utah, USA (37°33'26" N, 110°17'44" W)

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Anthony R. Kampf*, Travis A. Olds, Jakub Plášil and Joe Marty
*E-mail: akampf@nhm.org
The Zn analogue of rietveldite
Orthorhombic: $Pmn2_1$; structure determined
$a = 12.8712(9)$, $b = 8.3148(4)$, $c = 11.2959(4)$ Å
8.35(37), 6.42(62), 5.09(58), 4.67(100), 4.23(38), 3.916(46), 3.429(47), 3.340(39)
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 76262, 76264, 76265, 76266 and 76267
How to cite: Kampf, A.R., Olds, T.A., Plášil, J. and Marty, J. (2023) Zincorietveldite, IMA 2022-070. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-071**
Nickelalumite
$NiAl_4(SO_4)(OH)_{12}(H_2O)_3$
Nal
Kara-Tangi uranium deposit, Batken region, Kyrgyzstan
Vladimir Y. Karpenko, Atali A. Agakhanov, Leonid A. Pautov, Tamara V. Dikaya, Galiya K. Bekenova, Yulia Uvarova, Elena Sokolova and Frank C. Hawthorne*
*E-mail: frank.hawthorne@umanitoba.ca
The Ni analogue of chalcoalumite
Monoclinic: $P2_1/n$; structure determined
$a = 10.2567(5)$, $b = 8.8815(4)$, $c = 17.0989(8)$ Å, $\beta = 95.548(1)°$
8.35(100), 4.27(90), 3.02(60), 2.683(60), 2.508(80), 2.276(70), 1.981(90), 1.480(60)
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 6794
How to cite: Karpenko, V.Y., Agakhanov, A.A., Pautov, L.A., Dikaya, T.V., Bekenova, G.K., Uvarova, Y., Sokolova, E. and Hawthorne, F.C. (2023) Nickelalumite, IMA 2022-071. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-072**
Whiteite-(CaMnFe)
$CaMnFe_2Al_2(PO_4)_4(OH)_2{\cdot}8H_2O$
Wt-CaMnFe
In a pegmatite mine, Hagendorf-Süd, Oberpfalz, Bavaria, Germany (49°39'01" N, 12°27'35" E)
Rupert Hochleitner, Christian Rewitzer, Ian E. Grey*, William G. Mumme, Colin M. Macrae, Anthony R. Kampf, Erich Keck, Robert W. Gable and Alexander M. Glenn
*E-mail: ian.grey@csiro.au
Jahnsite group
Monoclinic; $P2/a$; structure determined
$a = 14.924(3)$, $b = 7.010(1)$, $c = 10.053(2)$ Å, $\beta = 111.31(3)°$
9.397(35), 4.932(38), 4.707(20), 3.493(20), 3.470(18), 2.923(29), 2.807(100), 1.950(20)
Cotype material is deposited in the collections of the Mineralogische Staatssammlung München, Theresienstrasse 41,80333 München, Germany, registration number MSM 38031
How to cite: Hochleitner, R., Rewitzer, C., Grey, I.E., Mumme, W.G., Macrae, C.M., Kampf, A.R., Keck, E., Gable, R.W. and Glenn, A.M. (2023) Whiteite-(CaMnFe), IMA 2022-072. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-073**
Napoliite
Pb_2OFCl
Npi
From a fumarole after the 1944 eruption of the Vesuvius volcano, Naples province, Campania, Italy
Anatoly V. Kasatkin*, Oleg I. Siidra, Fabrizio Nestola, Igor V. Pekov, Atali A. Agakhanov, Evgeny V. Nazarchuk, Natalia N. Koshlyakova, Nikita V. Chukanov and Manuela Rossi
*E-mail: anatoly.kasatkin@gmail.com
A dimorph of rumseyite
Tetragonal: $P4_2/mcm$; structure determined
$a = 5.742(1)$, $c = 12.524(4)$ Å
3.860(85), 3.139(20), 2.914(100), 2.866(63), 2.118(19), 2.027(19), 1.665(20), 1.642(23)
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 5885/1
How to cite: Kasatkin, A.V., Siidra, O.I., Nestola, F., Pekov, I.V., Agakhanov, A.A., Nazarchuk, E.V., Koshlyakova, N.N., Chukanov, N.V. and Rossi, M. (2023) Napoliite, IMA 2022-073. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

NEW MINERAL PROPOSALS APPROVED IN NOVEMBER 2022

IMA No. **2022-056**
Sidorovite
Fe_3Pt
Sido
Snegovaya River placer, Koryak Highlands, Far Eastern Region, Russia (61°32'06" N, 171°35'50" E)
Anton V. Kutyrev, Andrew M. McDonald*, Nobumichi Tamura, Louis J. Cabri, Nadezhda Tolstykh and Igor V. Pekov
*E-mail: amcdonald@laurentian.ca
The Fe analogue of tomamaeite
Cubic: $Pm\bar{3}m$; structure determined
$a = 3.725(4)$ Å
3.711(48), 2.161(100), 1.871(36), 1.673(27), 1.323(22), 1.248 (<10), 1.187(<10), 1.03(<10)
Type material is deposited in the collections of the Canadian Museum of Nature, 1740 Pink Road, Gatineau, QC, Canada, catalogue number CMNMC 90260
How to cite: Kutyrev, A.V., McDonald, A.M., Tamura, N., Cabri, L.J., Tolstykh, N. and Pekov, I.V. (2023) Sidorovite, IMA 2022-056. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-075**
Zipserite
Bi_5S_4
Zps
Alsó-Rózsa adit, about 5 km ENE of the village Nagybörzsöny, Pest province, Hungary (47°56'27" N, 18°53'40" E)
Juraj Majzlan*, Daniel Ozdín, Jiří Sejkora, Gwladys Steciuk, Jakub Plášil, Christiane Rößler and Christian Matthes
*E-mail: juraj.majzlan@uni-jena.de
New structure type

https://doi.org/10.1180/mgm.2022.135 Published online by Cambridge University Press

Trigonal: $P\bar{3}m$; structure determined
$a = 4.162(1)$, $c = 16.397(1)$ Å
3.520(18), 3.300(14), 3.009(100), 2.178(37), 2.081(37), 1.712 (20), 1.371(15), 1.322(17)
Type material is deposited in the collections of the Faculty of Natural Sciences, Comenius University in Bratislava, Ilkovičova 3278/6, 84104 Karlova Ves, Slovakia, catalogue number MMUK 7670
How to cite: Majzlan, J., Ozdín, D., Sejkora, J., Steciuk, G., Plášil, J., Rößler, C. and Matthes, C. (2023) Zipserite, IMA 2022-075. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-077**
Pleysteinite
$[(H_2O)_{0.5}K_{0.5}]_2Mn_2Al_3(PO_4)_4F_2{\cdot}14H_2O$
Pley
Hagendorf Süd pegmatite mine (64/67 m level), Oberpfalz, northeast Bavaria, Germany (49°39'01" N, 12°27'35" E)
Ian E. Grey*, Rupert Hochleitner, Christian Rewitzer, Anthony R. Kampf, Colin M. MacRae, Robert W. Gable, William G. Mumme, Erich Keck and Cameron Davidson
*E-mail: ian.grey@csiro.au
The Mn^{2+} analogue of mantienneite, and the Al analogue of benyacarite
Orthorhombic: *Pbca*; structure determined
$a = 10.4133(8)$, $b = 20.524(2)$, $c = 12.265(1)$ Å
10.29(49), 7.41(65), 6.13(100), 5.20(43), 3.699(59), 3.122(69), 2.859(76), 2.606(37)
Type material is deposited in the collections of the Staatlichen Naturwissenschaftlichen Sammlungen Bayerns, Menzinger Str. 71, 80638 Munich, Germany, registration number MSM 38032 (holotype), and the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue number 76271 (cotype)
How to cite: Grey, I.E., Hochleitner, R., Rewitzer, C., Kampf, A.R., MacRae, C.M., Gable, R.W., Mumme, W.G., Keck, E. and Davidson, C. (2023) Pleysteinite, IMA 2022-077. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA no. **2022-078**
Tetrahedrite-(Cu)
$Cu_6(Cu_4Cu_2)Sb_4S_{13}$
Ttr-Cu
Medvedza magnesite body (stope K 401), Bankov magnesite deposit, near Košice, Košice Region, Slovakia (48°44'8.06" N, 21°13'40.10" E)
Jiří Sejkora*, Cristian Biagioni, Martin Števko, Silvia Musetti and Dušan Peterec
*E-mail: jiri.sejkora@nm.cz
Tetrahedrite group
Cubic: $I\bar{4}3m$; structure determined
$a = 10.329(1)$ Å
3.652(9), 2,982(100), 2.761(7), 2.582(21), 2.435(7), 1.886(7), 1.826(40), 1.557(19)
Type material is deposited in the collections of the Department of Mineralogy and Petrology, National Museum in Prague, Cirkusová 1740, 19300 Praha 9, Czech Republic, catalogue number P1P 27/2022, and the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 20017
How to cite: Sejkora, J., Biagioni, C., Števko, M., Musetti, S. and Peterec, D. (2023) Tetrahedrite-(Cu), IMA 2022-078. CNMNC Newsletter 70; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA no. **2022-079**
Yeite
TiSi
Yei
As inclusions in corundum xenocrysts, Mount Carmel, Haifa district, Israel (32°44' N, 35°03' E)
Chi Ma*, William L. Griffin, Luca Bindi, Fernando Cámara and Vered Toledo
*E-mail: chima@caltech.edu
Known synthetic analogue
Orthorhombic: *Pnma*
$a = 6.55(1)$, $b = 3.64(1)$, $c = 4.99(1)$ Å
2.683(66), 2.435(58), 2.332(80), 2.188(100), 2.000(42), 1.963 (71), 1.820(44), 1.435(35)
Type material is deposited in the mineralogical collections of the Università di Milano, Via Mangiagalli 34, 20133 Milano, Italy, registration number MCMGPG-H2021-002
How to cite: Ma, C., Griffin, W.L., Bindi, L., Cámara, F. and Toledo, V. (2023) Yeite, IMA 2022-079. CNMNC Newsletter 70; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-080**
Gunmaite
$(Na_2Sr)Sr_2Al_{10}(PO_4)_4F_{14}(OH)_{12}$
Gum
Ashio Mountains, Tsukubara, Kiryu city, Gunma Prefecture, Japan (36°30'41" N, 139°25'26" E)
Daisuke Nishio-Hamane*, Takeshi Yajima, Yoshiya Ohki, Hirofumi Hori, Issei Ikari and Yoshihiro Ohara
*E-mail: hamane@issp.u-tokyo.ac.jp
New structure type
Trigonal: $R\bar{3}m$; structure determined
$a = 6.9972(2)$, $c = 50.270(2)$ Å
5.458(80), 3.499(57), 3.228(29), 2.965(100), 2.233(35), 2.138 (49), 1.900(59), 1.749(64)
Type material is deposited in the collections of the National Museum of Nature and Science, Amakubo, Tsukuba, Ibaraki 305-0005, Japan, specimen number NSM-M49762
How to cite: Nishio-Hamane, D., Yajima, T., Ohki, Y., Hori, H., Ikari, I. and Ohara, Y. (2023) Gunmaite, IMA 2022-080. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-081**
Tianhuixinite
$(MoO_3)_3{\cdot}H_2O$
Thx
Summit group of claims, near Cookes Peak, southern end of the Cookes Range, Luna Co., New Mexico, USA (32°33'47" N, 107° 43'48" W)
Xiangping Gu*, Ron Gibbs and Hexiong Yang
*E-mail: guxp2004@163.com
Known synthetic analogue
Hexagonal: $P6_3/m$
$a = 10.5845(3)$, $c = 3.7285(1)$ Å

9.174(100), 4.586(26), 3.456(94), 3.047(43), 2.539(34), 1.999 (13), 1.951(14), 1.641(22)
Type material is deposited in the collections of the University of Arizona Alfie Norville Gem & Mineral Museum, 115 N Church Ave Ste 121, Tucson, AZ 85701, USA, catalogue # 22722 (holotype), and the RRUFF Project, deposition # R220024 (cotype)
How to cite: Gu, X., Gibbs, R. and Yang, H. (2023) Tianhuixinite, IMA 2022-081. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA no. 2022-082
Hakite-(Fe)
$Cu_6(Cu_4Fe_2)Sb_4Se_{13}$
Hak-Fe
In the mine dump of the shaft No. 16 – Háje, near Příbram, Příbram ore district, Central Bohemia, Czech Republic (49° 40'33.894" N, 14°03'29.922" E)
Jiří Sejkora*, Cristian Biagioni, Pavel Škácha, Silvia Musetti and Zdeněk Dolníček
*E-mail: jiri.sejkora@nm.cz
Tetrahedrite group
Cubic: $I\bar{4}3m$; structure determined
$a = 10.7983(4)$ Å
3.818(9), 3.117(100), 2.886(15), 2.545(10), 1.971(15), 1.909(54), 1.752(10), 1.628(20)
Type material is deposited in the collections of the Department of Mineralogy and Petrology, National Museum in Prague, Cirkusová 1740, 19300 Praha 9, Czech Republic, catalogue number P1P 11/2016, and the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 20019
How to cite: Sejkora, J., Biagioni, C., Škácha, P., Musetti, S. and Dolníček, Z. (2023) Hakite-(Fe), IMA 2022-082. CNMNC Newsletter 70; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA no. 2022-083
Hakite-(Zn)
$Cu_6(Cu_4Zn_2)Sb_4Se_{13}$
Hak-Zn
In the mine dump of the shaft No. 16 – Háje, near Příbram, Příbram ore district, Central Bohemia, Czech Republic (49° 40'33.894" N, 14°03'29.922" E)
Jiří Sejkora*, Cristian Biagioni, Pavel Škácha, Silvia Musetti and Zdeněk Dolníček
*E-mail: jiri.sejkora@nm.cz
Tetrahedrite group
Cubic: $I\bar{4}3m$; structure determined
$a = 10.812(1)$ Å
3.822(8), 3.121(100), 2.890(15), 2.548(9), 1.974(15), 1.911(54), 1.754(10), 1.630(20)
Type material is deposited in the collections of the Department of Mineralogy and Petrology, National Museum in Prague, Cirkusová 1740, 19300 Praha 9, Czech Republic, catalogue number P1P 11/2016, and the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 20021
How to cite: Sejkora, J., Biagioni, C., Škácha, P., Musetti, S. and Dolníček, Z. (2023) Hakite-(Zn), IMA 2022-083. CNMNC Newsletter 70; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA no. 2022-084
Arsenogoldfieldite
$Cu_6Cu_6(As_2Te_2)S_{13}$
Asgf
North Star mine, Mammoth, Tintic district, Juab Co., Utah, USA (39°55'14" N, 112°06'26" W)
Jiří Sejkora*, Cristian Biagioni, Zdeněk Dolníček and Panagiotis Voudouris
*E-mail: jiri.sejkora@nm.cz
Tetrahedrite group
Cubic: $I\bar{4}3m$; structure determined
$a = 10.2868(4)$ Å
7.251(5), 3.638(8), 2.969(100), 2.573(9), 2.426(5), 1.819(21), 1.550(9), 1.484(7)
Type material is deposited in the collections of the Department of Mineralogy and Petrology, National Museum in Prague, Cirkusová 1740, 19300 Praha 9, Czech Republic, catalogue number P1P 28/2022 (holotype), and the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 20018 (holotype) and 20020 (cotype)
How to cite: Sejkora, J., Biagioni, C., Dolníček, Z. and Voudouris, P. (2023) Arsenogoldfieldite, IMA 2022-084. CNMNC Newsletter 70; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-085**
Stanevansite
$Mg(C_2H_3O_3)_2{\cdot}2H_2O$
Ses
Pusch Ridge, Santa Catalina Mountains, north of Tucson, Pima Co., Arizona, USA (32°21'42" N, 110°57'30" W)
Hexiong Yang*, Xiangping Gu, Warren Lazar, Ronald B. Gibbs and Robert T. Downs
*E-mail: hyang@arizona.edu
New structure type
Monoclinic: $P2_1/c$; structure determined
$a = 11.4927(2)$, $b = 5.8547(1)$, $c = 12.4711(2)$ Å, $\beta = 91.161(1)°$
5.47(62), 5.223(93), 4.787(100), 3.819(73), 3.102(71), 3.018(33), 2.580(20), 2.406(33)
Type material is deposited in the collections of the University of Arizona Alfie Norville Gem & Mineral Museum, 115 N Church Ave Ste 121, Tucson, AZ 85701, USA, catalogue # 22721 (holotype), and the RRUFF Project, deposition # R220011 (cotype)
How to cite: Yang, H., Gu, X., Lazar, W., Gibbs, R.B. and Downs, R.T. (2023) Stanevansite, IMA 2022-085. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-086**
Cuprocherokeeite
$[Pb_8Zn_3Cu^{2+}(OH)_{16}](SO_4)_4{\cdot}4H_2O$
Cchk
Redmond mine, Haywood Co., North Carolina, USA (35° 40'55" N, 83°00'56" W)
Anthony R. Kampf*, Jason B. Smith, John M. Hughes, Chi Ma and Christopher Emproto
*E-mail: akampf@nhm.org
Chemically and structurally related to cherokeeite

https://doi.org/10.1180/mgm.2022.135 Published online by Cambridge University Press

Monoclinic: $P2_1/n$; structure determined
$a = 12.6828(5)$, $b = 9.4629(5)$, $c = 14.7876(8)$ Å, $\beta = 94.798(4)°$
5.27(100), 4.53(48), 3.431(34), 3.315(24), 3.130(27), 3.081(68), 2.924(26), 2.435(22)
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 76272, 76273 and 76274
How to cite: Kampf, A.R., Smith, J.B., Hughes, J.M., Ma, C. and Emproto, C. (2023) Cuprocherokeeite, IMA 2022-086. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-087**
Elaliite
$(Fe_8^{2+}Fe^{3+})(PO_4)O_8$
Eal
El Ali meteorite, found in September 2020 close to Hiiraan, Somalia
Christopher D.K. Herd*, Chi Ma, Radhika Saini, Andrew J. Locock and Erin L. Walton
*E-mail: herd@ualberta.ca
Known synthetic analogue
Orthorhombic: *Cmmm*
$a = 5.95(1)$, $b = 25.69(1)$, $c = 3.06(1)$ Å
12.84(80), 2.699(42), 2.592(38), 2.569(46), 2.443(45), 2.141(44), 2.133(100), 1.511(77)
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: Herd, C.D.K., Ma, C., Saini, R., Locock, A.J. and Walton, E.L. (2023) Elaliite, IMA 2022-087. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-088**
Elkinstantonite
$Fe_4(PO_4)_2O$
Elk
El Ali meteorite, found in September 2020 close to Hiiraan, Somalia
Christopher D.K. Herd*, Chi Ma, Radhika Saini, Andrew J. Locock and Erin L. Walton
*E-mail: herd@ualberta.ca
Known synthetic analogue
Monoclinic: $P2_1/c$
$a = 6.56(1)$, $b = 11.27(1)$, $c = 9.38(1)$ Å, $\beta = 104.0(1)°$
3.063(25), 2.929(60), 2.869(78), 2.822(45), 2.817(100), 2.671(64), 2.508(30), 1.849(28)
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: Herd, C.D.K., Ma, C., Saini, R., Locock, A.J. and Walton, E.L. (2023) Elkinstantonite, IMA 2022-088. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA no. 2022-090
Hakite-(Cd)
$Cu_6(Cu_4Cd_2)Sb_4Se_{13}$
Hak-Cd
In the mine dump of the shaft No. 16 – Háje, near Příbram, Příbram ore district, Central Bohemia, Czech Republic (49°40'33.894" N, 14°03'29.922" E)
Jiří Sejkora*, Cristian Biagioni, Pavel Škácha, Silvia Musetti and Zdeněk Dolníček
*E-mail: jiri.sejkora@nm.cz
Tetrahedrite group
Cubic: $I\bar{4}3m$; structure determined
$a = 10.8860(6)$ Å
3.143(100), 2.909(12), 2.566(8), 2.135(9), 1.988(13) 1.924(50), 1.766(9), 1.641(20)
Type material is deposited in the collections of the Department of Mineralogy and Petrology, National Museum in Prague, Cirkusová 1740, 19300 Praha 9, Czech Republic, catalogue number P1P 30/2022, and the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 20022
How to cite: Sejkora, J., Biagioni, C., Škácha, P., Musetti, S. and Dolníček, Z. (2023) Hakite-(Cd), IMA 2022-090. CNMNC Newsletter 70; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA No. **2022-091**
Libbyite
$(NH_4)_2(Na_2\square)[(UO_2)_2(SO_4)_3(H_2O)]_2{\cdot}7H_2O$
Ly
Blue Lizard mine, Red Canyon, White Canyon District, San Juan Co., Utah, USA (37°33'26" N, 110°17'44" W)
Anthony R. Kampf*, Travis A. Olds, Jakub Plášil, Barbara P. Nash and Joe Marty
*E-mail: akampf@nhm.org
New structure type
Tetragonal: $P4_12_12$; structure determined
$a = 10.704(1)$, $c = 31.824(2)$ Å
7.97(100), 4.77(23), 4.58(79), 3.553(71), 3.385(25), 2.963(21), 2.648(31), 2.053(25)
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 76267, 76268, 76269 and 76270
How to cite: Kampf, A.R., Olds, T.A., Plášil, J., Nash, B.P. and Marty, J. (2023) Libbyite, IMA 2022-091. CNMNC Newsletter 70, *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

IMA no. 2022-092
Zvěstovite-(Fe)
$Ag_6(Ag_4Fe_2)As_4S_{13}$
Zvě-Fe
Ulatayskoe Ag-Cu-Co occurrence, Ulatay river, Ovyurskiy District, Tuva Republic, Eastern Siberia, Russia
Cristian Biagioni*, Anatoly V. Kasatkin, Fabrizio Nestola, Radek Škoda, Atali A. Agakhanov and Natalia N. Koshlyakova
*E-mail: cristian.biagioni@unipi.it
Tetrahedrite group
Cubic: $I\bar{4}3m$; structure determined
$a = 10.8601(3)$ Å
7.679(6), 4.434(4), 3.135(100), 2.715(19), 2.560(4), 1.983(11), 1.920(31), 1.637(15),
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 5919/1

How to cite: Biagioni, C., Kasatkin, A.V., Nestola, F., Škoda, R., Agakhanov, A.A. and Koshlyakova, N.N. (2023) Zvěstovite-(Fe), IMA 2022-092. CNMNC Newsletter 70; *Mineralogical Magazine*, **87**, https://doi.org/10.1180/mgm.2022.135

Symbol for raydemarkite

The correct symbol for the new mineral raydemarkite (IMA No. 2022-015) is ryd, and not rdy, as given in CNMNC Newsletter 68.

NOMENCLATURE/CLASSIFICATION PROPOSALS APPROVED IN OCTOBER 2022

Triphylite group

The triphylite group is established; it includes seven mineral species: triphylite, lithiophilite, heterosite, purpurite, simferite, karenwebberite and natrophilite. Sicklerite and ferrisicklerite have been discredited. Simferite has been redefined as $LiMg(PO_4)$.

NOMENCLATURE/CLASSIFICATION PROPOSALS APPROVED IN NOVEMBER 2022

IMA 22-F: Holotype redefinition for donnayite-(Y)

Proposal 22-F is accepted. Re-examination of donnayite-(Y) type specimens showed that the original description contains data collected on two different phases with simplified formulae $NaCaSr_3Y(CO_3)_6{\cdot}3H_2O$ and $Na_2Sr_2YCe(CO_3)_6{\cdot}3H_2O$. The latter corresponds to the recently approved species alicewilsonite-(YCe) (IMA 2020-055). Donnayite-(Y), with the ideal formula $NaCaSr_3Y(CO_3)_6{\cdot}3H_2O$, was found in only one specimen - CMNMC 39396 - out of seven housed at the Canadian Museum of Nature, 240 McLeod St, Ottawa, ON K2P 2R1, Canada. This specimen has become the holotype of donnayite-(Y).

IMA 22-G: Establishment of the mckelveyite group

Proposal 22-G is accepted, and the mckelveyite group is established. Seven minerals belong to the group: alicewilsonite-(YCe), alicewilsonite-(YLa), bainbridgeite-(YCe), donnayite-(Y), ewaldite, mckelveyite-(Y), and weloganite. Mckelveyite group minerals are carbonates with the general formula $A_3B_3(CO_3)_6{\cdot}3H_2O$, where A = Na, Ca, Y+HREE, Zr, and B = Sr, Ba, LREE. Their structure is based on two alternating layers with larger B cations forming one layer and smaller A cations A forming another. Different order-disorder modifications are known resulting in triclinic, monoclinic and trigonal minerals with essentially the same structure.

IMA 22-H: Redefinition of bystrite

Proposal 22-H on bystrite is accepted. The mineral bystrite was first described as a trigonal cancrinite-related phase with the simplified formula $Ca(Na,K)_7(Al_6Si_6O_{24})(S_3^{2-})1.5{\cdot}H_2O$. Initially, two bystrite varieties were distinguished: (i) K-rich and Cl-deficient, and (ii) Cl-rich and K-deficient. The latter mineral has been subsequently approved as a separate mineral species, sulfhydrylbystrite, with the formula $Na_5K_2Ca(Al_6Si_6O_{24})S_5^{2-}(HS)^-$. The crystal structure of the presumed Cl-rich and K-deficient bystrite variety shows that this mineral is isostructural with sulfhydrylbystrite and is its analogue with Cl^- instead of $(HS)^-$ in cancrinite cages, and Na^+ at the site that is predominantly occupied by K^+ in sulfhydrylbystrite. The ideal formula of bystrite is consequently redefined as $Na_7Ca(Al_6Si_6O_{24})S_5^{2-}Cl^-$.

Establishment of the kristiansenite group

The proposal to establish the kristiansenite group is accepted. The group includes three mineral species: kristiansenite, with formula $Ca_4Sc_2Sn_2(Si_2O_7)_2(Si_2O_6OH)_2$, silesiaite, with formula $Ca_4Fe_2^{3+}Sn_2(Si_2O_7)_2(Si_2O_6OH)_2$, and kozłowskiite, with formula $Ca_4Fe^{2+}Sn_3(Si_2O_7)_2(Si_2O_6OH)_2$.

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