Eur. J. Mineral., 34, 253–257, 2022
https://doi.org/10.5194/ejm-34-253-2022

European Journal of Mineralogy
Open Access

IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) – Newsletter 66

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Published: 13 April 2022

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 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 *European Journal of Mineralogy* on a routine basis, as well as being added month by month to the commission's website. 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.

1 New mineral proposals approved in February 2022

IMA no. 2021-076a

Arsenoveszelyite
$Cu_2Zn(AsO_4)(OH)_3 \cdot 2H_2O$
Avsz
Village of Sanguozhuang, town of Tangdan, Dongchuan District, city of Kunming, Yunnan Province, China (26°07′36″ N, 103°00′19″ E)
Hongtao Shen, Jinhua Hao, Ningyue Sun, Guowu Li*, Yuan Xue, and Liqun Luo
*E-mail: liguowu@cugb.edu.cn
The As analogue of veszelyite
Monoclinic: $P2_1/c$; structure determined
$a = 7.5852(4)$, $b = 10.3877(5)$, $c = 9.8714(5)$ Å, $\beta = 102.984(5)°$
7.129(95), 4.391(40), 3.698(100), 3.521(45), 3.000(50), 2.811(35), 2.511(40), 2.388(20)
Type material is deposited in the mineralogical collections of the Geological Museum of China, No. 15, Yangrou Hutong,

Xisi, Beijing 100083, People's Republic of China, catalogue number M16126 (holotype), and the Crystal Structure Laboratory, China University of Geosciences, Beijing 100083, People's Republic of China, catalogue number DC-3 (cotype)

How to cite: Shen, H., Hao, J., Sun, N., Li, G., Xue, Y., and Luo, L.: Arsenoveszelyite, IMA 2021-076a, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-099

Rudolfhermannite
$Fe_2^{3+}(Te^{4+}O_3)_3 \cdot H_2O$
Rhr

Ozernovskoe gold deposit, Orebody No. 5, 115 km north of the town of Klyuchi, Kamchatka Peninsula, Far-Eastern Region, Russia (57°35′31″ N, 160°38′13″ E)

Igor V. Pekov*, Sergey N. Britvin, Petr A. Pletnev, Vasiliy O. Yapaskurt, Dmitry I. Belakovskiy, Nikita V. Chukanov, Marina F. Vigasina, and Aleksandr P. Ponomarev
*E-mail: igorpekov@mail.ru

Closely related to the minerals of the zemannite group
Hexagonal: $P6_3/m$; structure determined
$a = 9.2490(5)$, $c = 7.5688(6)$ Å
8.01(100), 4.005(53), 3.775(15), 3.027(13), 2.925(17), 2.809(27), 2.747(45), 1.707(17)

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 5761/1

How to cite: Pekov, I. V., Britvin, S. N., Pletnev, P. A., Yapaskurt, V. O., Belakovskiy, D. I., Chukanov, N. V., Vigasina, M. F., and Ponomarev, A. P.: Rudolfhermannite, IMA 2021-099, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-100

Magnesio-ferri-hornblende
$Ca_2(Mg_4Fe^{3+})[(Si_7Al)O_{22}](OH)_2$
Mfhbl

Boluokenu Island arc belt, western Tianshan, Xinjiang, China (44°05′25″ N, 82°43′26″ E)

Yongmei Zhang, Xuexiang Gu*, Ting Li, Guang Fan, Yingshuai Zhang, and Jialin Wang
*E-mail: xuexiang_gu@cugb.edu.cn

Amphibole supergroup
Monoclinic: $C2/m$; structure determined
$a = 9.8620(3)$, $b = 18.1060(5)$, $c = 5.3081(1)$ Å, $\beta = 104.848(1)°$
8.397(52), 3.383(41), 2.717(100), 2.597(84), 2.545(61), 1.854(49), 1.585(39), 1.519(62)

Type material is deposited in the mineralogical collections of the Geological Museum of China, No. 16, Yangrou Hutong, Xisi, Beijing 100031, People's Republic of China, catalogue number M16131

How to cite: Zhang, Y., Gu, X., Li, T., Fan, G., Zhang, Y., and Wang, J.: Magnesio-ferri-hornblende, IMA 2021-100, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-103

Nafeasite
$Na_3Fe_3^{3+}(AsO_3OH)_6 \cdot 3H_2O$
Nfa

Torrecillas Mine, Salar Grande, Iquique Province, Tarapacá region, Chile (20°58′13″ S, 70°08′17″ W)

Anthony R. Kampf*, Jochen Schlüter, Thomas Malcherek, Bianca Paulenz, Dieter Pohl, Chi Ma, Maurizio Dini, and Arturo A. Molina Donoso
*E-mail: akampf@nhm.org

New structure type
Monoclinic: $C2$; structure determined
$a = 18.688(2)$, $b = 8.6769(7)$, $c = 14.810(1)$ Å, $\beta = 105.238(5)°$
9.04(20), 7.23(89), 4.33(30), 3.127(100), 3.085(33), 2.809(15), 2.518(15), 1.417(16)

Type material is deposited in the collections of the Mineralogisches Museum Hamburg, Leibniz-Institut zur Analyse des Biodiversitätswandels, Grindelallee 48, 20146 Hamburg, Germany, catalogue number MD760 (holotype), and the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue numbers 76193 (piece of the holotype) and 76194 (cotype)

How to cite: Kampf, A. R., Schlüter, J., Malcherek, T., Paulenz, B., Pohl, D., Ma, C., Dini, M., and Molina Donoso, A. A.: Nafeasite, IMA 2021-103, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-104

Amgaite
$Tl_2^{3+}Te^{6+}O_6$
Amgt

In the upstream region of Khokhoy creek, right tributary of Amga River, 120 km west of the town of Aldan, Aldanskiy region, Sakha Republic (Yakutia), eastern Siberia, Russia (59°06′36″ N, 123°14′42″ E)

Anatoly V. Kasatkin*, Galina S. Anisimova, Fabrizio Nestola, Jakub Plášil, Jiří Sejkora, Radek Škoda, Evgeniy P. Sokolov, Larisa A. Kondratieva, and Veronika N. Kardashevskaia
*E-mail: anatoly.kasatkin@gmail.com

Known synthetic analogue
Trigonal: $P321$; structure determined
$a = 9.0600(9)$, $c = 4.9913(11)$ Å
3.352(100), 3.063(15), 2.619(49), 2.541(7), 2.065(18), 1.804(28), 1.697(8), 1.625(9)
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 5773/1
How to cite: Kasatkin, A. V., Anisimova, G. S., Nestola, F., Plášil, J., Sejkora, J., Škoda, R., Sokolov, E. P., Kondratieva, L. A., and Kardashevskaia, V. N.: Amgaite, IMA 2021-104, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-105

Shinarumpite
$[Co(H_2O)_6][(UO_2)(SO_4)_2(H_2O)]\cdot 4H_2O$
Sru
Scenic Mine, Fry Mesa, White Canyon District, San Juan Co., Utah, USA (37°38′43″ N, 110°07′10″ W)
Anthony R. Kampf*, Jakub Plášil, Travis A. Olds, Chi Ma, and Joe Marty
*E-mail: akampf@nhm.org
Compositionally and structurally very similar to leydetite
Monoclinic: $P2_1/c$; structure determined
$a = 21.055(1)$, $b = 6.8708(3)$, $c = 12.9106(5)$ Å, $\beta = 96.678(7)°$
10.37(100), 6.39(26), 5.73(43), 5.20(70), 4.983(23), 4.698(31), 3.380(24), 3.326(30)
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 76199 (holotype), 76200, 76201, and 76102 (cotypes)
How to cite: Kampf, A. R., Plášil, J., Olds, T. A., Ma, C., and Marty, J.: Shinarumpite, IMA 2021-105, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-106

Carbocalumite
$Ca_4Al_2(OH)_{12}(CO_3)\cdot 6H_2O$
Cbcl
Ca. 2 km south-east of the Hatrurim Junction (road no. 31), Hatrurim Basin, Negev Desert, Israel
Sergey N. Britvin*, Mikhail N. Murashko, Yevgeny Vapnik, Maria G. Krzhizhanovskaya, Natalia S. Vlasenko, and Oleg S. Vereshchagin
*E-mail: sbritvin@gmail.com
Hydrotalcite supergroup
Trigonal: $R\bar{3}c$; structure determined
$a = 5.7646(1)$, $c = 49.409(1)$ Å
8.27(100), 4.120(23), 3.888(29), 2.886(33), 2.723(11), 2.554(18), 2.449(30), 2.362(17)
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 5736/1
How to cite: Britvin, S. N., Murashko, M. N., Vapnik, Y., Krzhizhanovskaya, M. G., Vlasenko, N. S., and Vereshchagin. O. S.: Carbocalumite, IMA 2021-106, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

2 New mineral proposals approved in March 2022

IMA no. 2020-101

Paradimorphite
As_4S_3
Pdim
Solfatara di Pozzuoli, Phlegraean Fields, Napoli, Campania, Italy (40°49′41″ N, 14°08′30″ E)
Italo Campostrini, Carlo Castellano, Francesco Demartin*, Ivano Rocchetti, Pietro Vignola, and Massimo Russo
*E-mail: francesco.demartin@unimi.it
A dimorph of dimorphite
Orthorhombic: *Pnma*; structure determined
$a = 9.1577(7)$, $b = 8.0332(6)$, $c = 10.2005(8)$ Å
6.299(48), 5.186(100), 4.174(31), 3.889(21), 3.152(34), 2.980(41), 1.846(27), 1.808(23)
Type material is deposited in the reference collections of the Dipartimento di Chimica, University of Milan, Via Golgi 19, 20133 Milan, Italy, sample numbers 2020-03/6121 (holotype) and 2020-04/4226 (cotype)
How to cite: Campostrini, I., Castellano, C., Demartin, F., Rocchetti, I., Vignola, P., and Russo, M.: Paradimorphite, IMA 2020-101, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-107

Murphyite
$Pb(Te^{6+}O_4)$
Mpy
Grand Central Mine, Tombstone District, Cochise Co., Arizona, USA (31°42′09″ N, 110°03′43″ W)
Hexiong Yang*, Xiangping Gu, Ronald B. Gibbs, and Michael M. Scott
*E-mail: hyang@arizona.edu
The Te^{6+} analogue of raspite
Orthorhombic: $P2_1/a$; structure determined

$a = 13.6089(3)$, $b = 5.0175(1)$, $c = 5.5767(2)$ Å, $\beta = 107.928(1)°$
3.655(100), 3.604(43), 3.513(69), 3.235(34), 2.768(51), 2.718(57), 2.515(48), 1.857(55)
Type material is deposited in the collections of the University of Arizona Alfie Norville Gem and Mineral Museum, 15 N Church Ave, Tucson, AZ 85701, USA, catalogue no. 22715 (holotype), and the RRUFF Project, deposition no. R210011 (cotype)
How to cite: Yang, H., Gu, X., Gibbs, R. B., and Scott, M. M.: Murphyite, IMA 2021-107, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-108

Deynekoite
$Ca_9Fe^{3+}(PO_4)_7$
Dnk
Daba-Siwaqa complex, Transjordan Plateau, Jordan (31°22′01″ N, 36°11′10″ E)
Evgeny Galuskin*, Marcin Stachowicz, Irina O. Galuskina, Krzysztof Woźniak, Yevgeny Vapnik, Mikhail N. Murashko, and Grzegorz Zieliński
*E-mail: evgeny.galuskin@us.edu.pl
Cerite supergroup
Trigonal: $R3c$; structure determined
$a = 10.3516(3)$, $c = 37.160(2)$ Å
6.451(51), 3.433(25), 3.183(64), 2.861(100), 2.737(24), 2.588(81), 1.919(24), 1.716(28)
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 5791/1
How to cite: Galuskin, E., Stachowicz, M., Galuskina, I. O., Woźniak, K., Vapnik, Y., Murashko, N. N., and Zieliński, G.: Deynekoite, IMA 2021-108, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-109

Poellmannite
$Ca_6Al_3(OH)_{18}[Na(H_2O)_6](SO_4)_2{\cdot}6H_2O$
Poe
Ca. 2 km south-east of the Hatrurim Junction (road no. 31), Hatrurim Basin, Negev Desert, Israel
Sergey N. Britvin*, Mikhail N. Murashko, Maria G. Krzhizhanovskaya, Yevgeny Vapnik, Oleg S. Vereshchagin, and Natalia S. Vlasenko
*E-mail: sbritvin@gmail.com
Hydrotalcite supergroup
Trigonal: $R\overline{3}$; structure determined
$a = 9.9643(2)$, $c = 30.2212(7)$ Å
10.12(100), 5.04(81), 4.47(23), 3.544(31), 2.877(33), 2.497(34), 2.418(22), 2.247(21)
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 5798/1
How to cite: Britvin, S. N., Murashko, M. N., Krzhizhanovskaya, M. G., Vapnik, Y., Vereshchagin, O. S., and Vlasenko, N. S.: Poellmannite, IMA 2021-109, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-110

Griffinite
Al_2TiO_5
Gfn
As inclusions within corundum xenocrysts from the Mount Carmel area, Israel
Chi Ma*, Luca Bindi, Fernando Cámara, and Vered Toledo
*E-mail: chima@caltech.edu
The Al analogue of pseudobrookite
Orthorhombic: $Cmcm$
$a = 3.58(2)$, $b = 9.44(1)$, $c = 9.65(1)$ Å
4.720(77), 3.347(100), 3.162(39), 2.658(90), 1.903(57), 1.790(55), 1.688(44), 1.485(32)
Type material is deposited in the mineralogical collections of the Dipartimento di Scienze della Terra "A. Desio", Università di Milano, Via Mangiagalli 34, 20133 Milan, Italy, registration number MCMGPG-H2021-002
How to cite: Ma, C., Bindi, L., Cámara, F., and Toledo, V.: Griffinite, IMA 2021-110, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-111

Magnéliite
$Ti_2^{3+}Ti_2^{4+}O_7$
Mnli
As inclusions within corundum xenocrysts from the Mount Carmel area, Israel
Chi Ma*, William L. Griffin, Luca Bindi, Fernando Cámara, and Vered Toledo
*E-mail: chima@caltech.edu
Known synthetic analogue
Triclinic: $P\overline{1}$
$a = 5.60(1)$, $b = 7.13(1)$, $c = 12.47(1)$ Å, $\alpha = 95.1(1)$, $\beta = 95.2(1)$, $\gamma = 108.7(1)°$
4.277(73), 3.020(74), 2.818(100), 2.800(49), 2.523(57), 1.721(49), 1,718(50), 1.666(51)

Type material is deposited in the mineralogical collections of the Dipartimento di Scienze della Terra "A. Desio", Università di Milano, Via Mangiagalli 34, 20133 Milan, Italy, registration number MCMGPG-H2021-001

How to cite: Ma, C., Griffin, W. L., Bindi, L., Cámara, F., and Toledo, V.: Magnéliite, IMA 2021-111, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-112

Magganasite

$CuFe_3^{3+}O(AsO_4)_3$

Mgg

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.)

Igor V. Pekov*, Natalia V. Zubkova, Atali A. Agakhanov, Natalia N. Koshlyakova, Nikita V. Chukanov, Vasiliy O. Yapaskurt, Sergey N. Britvin, Anna G. Turchkova, Maria A. Nazarova, and Dmitry Y. Pushcharovsky

*E-mail: igorpekov@mail.ru

New structure type

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

$a = 5.1813(7)$, $b = 9.6427(11)$, $c = 9.6834(11)$ Å, $\alpha = 82.07(1)$, $\beta = 78.68(1)$, $\gamma = 79.96(1)°$

3.761(100), 3.540(46), 3.280(88), 3.204(62), 3.170(41), 2.989(51), 2.889(65), 2.510(64)

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 5799/1

How to cite: Pekov, I. V., Zubkova, N. V., Agakhanov, A. A., Koshlyakova, N. N., Chukanov, N. V., Yapaskurt, V. O., Britvin, S. N., Turchkova, A. G., Nazarova, M. A., and Pushcharovsky, D. Y.: Magganasite, IMA 2021-112, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

IMA no. 2021-113

Elliottite

$NaMgAl_3(PO_4)_2F_6{\cdot}9H_2O$

Eli

Tom's Quarry, Kapunda, South Australia, Australia (34°21′ S, 138°55′ E)

Ian E. Grey*, W. Gus Mumme, Colin M. MacRae, Anthony R. Kampf, and Stuart J. Mills

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

A dimorph of penriceite

Monoclinic: $C2/m$; structure determined

$a = 12.242(1)$, $b = 7.0118(7)$, $c = 11.2946(9)$ Å, $\beta = 101.19(1)°$

11.08(100), 6.059(9), 5.782(12), 5.532(10), 5.106(31), 3.346(6), 2.882(8), 2.852(17)

Type material is deposited in the mineralogical collections of the South Australia Museum, North Terrace, Adelaide, SA 5000, Australia, catalogue number G35026 (holotype), and the Museums Victoria, GPO Box 666, Melbourne, Vic 3001, Australia, catalogue number M45575 (cotype)

How to cite: Grey, I. E., Mumme, W. G., MacRae, C. M., Kampf, A. R., and Mills, S. J.: Elliottite, IMA 2021-113, in: CNMNC Newsletter 66, Eur. J. Mineral., 34, https://doi.org/10.5194/ejm-34-253-2022, 2022.

3 Nomenclature and classification proposals approved in March 2022

3.1 IMA 22-A: redefinition of montanite

Proposal 22-A is accepted, and the status of montanite is changed from "Q" to "Rd". The formula of montanite is modified from $Bi_2TeO_6{\cdot}2H_2O$ to $Bi_2TeO_6 \cdot nH_2O$ ($0 \leq n \leq 2/3$), and two neotypes, preserved at the Natural History Museum in London, UK, are created. Type localities are Highland, Montana, USA (sample BM 85116), and David Beck's Mine, North Carolina, USA (sample BM 1985, Nev336).

3.2 IMA 22-B: redefinition of moxuanxueite

Proposal 22-B is accepted, and the ideal end-member formula of moxuanxueite (IMA no. 2019-100) is modified from $Na_2Ca_5Zr(Si_2O_7)_2F_4$ to $NaCa_6Zr(Si_2O_7)_2OF_3$.

3.3 IMA 22-C: arrojadite group nomenclature – sigismundite reinstated

Proposal 22-C is accepted, and arrojadite-(BaFe) is renamed sigismundite, according to the rule for the preservation of historical names.