



## IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) – Newsletter 77

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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 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 December 2023

#### IMA no. 2022-121a

Lishiite

$(\text{Ca}_2\Box)\text{Sr}_3(\text{CO}_3)_5$

Lht

Shaxiongdong carbonatite syenite complex, about 150 km southwest of Shiyan, Hubei Province, Zhushan County, China (32°09'14.37" N, 110°18'46.64" E)

Jie Dai\*, Tong Wang, Guowu Li, Guan Wang, Xiaodong Pan, Shangke Xie, Jing Ren, Kunyang Wang, Ting Li, Tao Wang, Jiale He, Jinsha Xu, and Ganfu Shen

\* E-mail: daijegirl@163.com

Burbankite group

Hexagonal:  $P6_3mc$ ; structure determined

$a = 10.4898(5)$ ,  $c = 6.4167(5)$  Å  
3.461(92), 3.069(74), 2.615(199), 2.365(62), 1.991(66),  
1.936(63), 1.858(86), 1.663(61)

Type material is deposited in the collections of the Geological Museum of China, Xisi, Yangrou Hutong No. 15, Xicheng District, Beijing, People's Republic of China, catalogue number M16140

How to cite: Dai, J., Wang, T., Li, G., Wang, G., Pan, X., Xie, S., Ren, J., Wang, K., Li, T., Wang, T., He, J., Xu, J., and Shen, G.: Lishiite, IMA 2022-121a, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-032a

Rotherkopfite

$\text{KNa}_2(\text{Fe}_{2.5}^{2+}\text{Ti}_{1.5})\text{Fe}^{2+}(\text{Si}_4\text{O}_{12})_2$

Rkp

Rother Kopf, Roth, near Gerolstein, Eifel volcanic fields, Rhineland-Palatinate, Germany (50°14'47" N, 6°37'23" E)

Anthony R. Kampf\*, Gerhard Möhn, Chi Ma, George Rossman, Joy Désor, and Yunbin Guan

\* E-mail: [akampf@nhm.org](mailto:akampf@nhm.org)

Neptunite group

Monoclinic:  $C2/c$ ; structure determined

$a = 16.460(2)$ ,  $b = 12.5457(6)$ ,  $c = 10.0487(7)$  Å,  $\beta = 115.669(7)^\circ$

9.63(100), 7.76(33), 3.339(38), 3.198(48), 2.952(67), 2.867(37), 2.179(35), 1.511(34)

Type material is deposited in the collections of the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue number 76283

How to cite: Kampf, A. R., Möhn, G., Ma, C., Rossman, G., Désor, J., and Guan, Y.: Rotherkopfite, IMA 2023-032a, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-046

Zhonghongite

$\text{Cu}_{29}(\text{As,Sb})_{12}\text{S}_{33}$

Zhh

Cordilleran veins, in the Jiama deposit, about 70 km east of Lhasa, south Tibet, China (29°42' N, 91°45' E)

Shi-Ji Zheng\*, Xiang-Ping Gu, Zhong-Jie Bai, and Zhong-Kun Zhang

\* E-mail: [zhengshiji@mail.gyig.ac.cn](mailto:zhengshiji@mail.gyig.ac.cn)

New structure type

Orthorhombic:  $F2mm$ ; structure determined

$a = 10.37741(5)$ ,  $b = 14.69821(9)$ ,  $c = 36.7645(2)$  Å  
4.397(2), 3.483(3), 2.998(100), 2.596(27), 1.834(58), 1.566(25), 1.499(4), 1.298(3)

Type material is deposited in the collections of the Geological Museum of China, Xisi, Yangrou Hutong No. 16, Beijing 100031, People's Republic of China, catalogue number GM-CTM2023002

How to cite: Zheng, S.-J., Gu, X.-P., Bai, Z.-J., and Zhang, Z.-K.: Zhonghongite, IMA 2023-046, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-074

Ehrigite

$\text{Bi}_8\text{Te}_3$

Ehg

Good Hope gold mine, Hedley, British Columbia, Canada (49°19'54" N, 120°00'48" W)

Cristiana L. Ciobanu\*, Nigel J. Cook, Jie Yao, Ashley Slattery, and Benjamin Wade

\* E-mail: [cristiana.ciobanu@adelaide.edu.au](mailto:cristiana.ciobanu@adelaide.edu.au)

Tetradymite group

Trigonal:  $R\bar{3}m$

$a = 4.519(6)$ ,  $c = 65.18(2)$  Å

3.266(100), 2.362(38), 2.260(38), 1.858(21), 1.633(12), 1.487(15), 1.435(18), 1.323(12)

Type material is deposited in the collections of the South Australian Museum, North Terrace, Adelaide, SA 5000, Australia, catalogue number G35384

How to cite: Ciobanu, C. L., Cook, N. J., Yao, J., Slattery, A., and Wade, B.: Ehrigite, IMA 2023-074, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-075

Amableite-(Ce)

$\text{Na}_{15}[(\text{Ce}_{1.5}\text{Na}_{1.5})\text{Mn}_3]\text{Mn}_2\text{Zr}_3\text{Si}[\text{Si}_{24}\text{O}_{69}(\text{OH})_3](\text{OH})_2 \cdot \text{H}_2\text{O}$   
Ambl-Ce

Demix-Varennes quarry, Saint-Amable sill, Lajemmerais RCM, Montérégie, Quebec, Canada (45°40'01" N, 73°20'35" W)

Nikita V. Chukanov\*, Andrey A. Zolotarev, Christof Schäfer, Dmitry A. Varlamov, Igor V. Pekov, Marina F. Vigasina, Dmitry I. Belakovskiy, Sergey M. Aksenov, Svetlana A. Vozchikova, and Sergey N. Britvin

\* E-mail: [nikchukanov@yandex.ru](mailto:nikchukanov@yandex.ru)

Eudialyte group

Trigonal:  $R3$ ; structure determined

$a = 14.1340(3)$ ,  $c = 30.378(1)$  Å  
11.34(51), 7.06(76), 6.00(32), 4.312(63), 3.783(38), 3.538(43), 2.963(84), 2.837(100)

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 6921/1

How to cite: Chukanov, N. V., Zolotarev, A. A., Schäfer, C., Varlamov, D. A., Pekov, I. V., Vigasina, M. F., Belakovskiy, D. I., Aksenov, S. M., Vozchikova, S. A., and Britvin, S. N.: Amableite-(Ce), IMA 2023-075, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-083

Chinnerite

$[\text{Mg}(\text{H}_2\text{O})_6]\text{Na}(\text{H}_2\text{O})_2\text{Al}_3(\text{PO}_4)_2\text{F}_6$

Chin

Penrice quarry, 2 km north of Angaston, South Australia, Australia

Peter Elliott, Ian E. Grey\*, Stephanie Boer, Anthony R. Kampf, Colin M. MacRae, Alexander Glenn, and Cameron Davidson

\* E-mail: [ian.grey@csiro.au](mailto:ian.grey@csiro.au)

Chemically and structurally related to penriceite

Monoclinic:  $P2/m$ ; structure determined

$a = 9.863(3)$ ,  $b = 6.946(1)$ ,  $c = 12.345(2)$  Å,  $\beta = 96.85(3)^\circ$

12.42(76), 7.95(48), 5.73(61), 5.29(35), 4.98(25), 2.990(48), 2.862(100), 2.735(33)

Type material is deposited in the collections of the South Australian Museum, North Terrace, Adelaide, SA 5000, Australia, catalogue number G35383 (holotype), and the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue number 76301 (cotype)

How to cite: Elliott, P., Grey, I. E., Boer, S., Kampf, A. R., MacRae, C. M., Glenn, A., and Davidson, C.: Chinnerite, IMA 2023-083, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-084

Bayanoboite-(Y)

$\text{Ba}_2\text{Y}(\text{CO}_3)_2\text{F}_3$

Byb-Y

Bayan Obo deposit (main pit), Baotou, Inner Mongolia, China, (41°47' N, 109°57' E)

Yuan Xue, Ningyue Sun, Guowu Li\*, Jinhua Hao, Peng Liu, Wenlei Song, Xianhua Li, Junfeng Shen, Li Yang, Zhaojing Wang, Wenxiang Meng, Guoying Yan, Yonggang Zhao, and Yun Liu

\* E-mail: [liguowu@cugb.edu.cn](mailto:liguowu@cugb.edu.cn)

New structure type

Orthorhombic:  $Pbcn$ ; structure determined

$a = 9.4528(4)$ ,  $b = 6.9499(2)$ ,  $c = 11.7638(5)$  Å

5.011(31), 3.712(100), 3.475(22), 3.216(56), 2.789(35), 2.193(21), 1.961(33), 1.853(15)

Type material is deposited in the collections of the Geological Museum of China, Xisi, Yangrou Hutong No. 15, Xicheng District, Beijing, People's Republic of China, catalogue number GMCTM2023008 (holotype), and the Crystal Structure Laboratory, China University of Geosciences, Beijing 100083, People's Republic of China, catalogue number BYEB-2 (cotype)

How to cite: Xue, Y., Sun, N., Li, G., Hao, J., Liu, P., Song, W., Li, X., Shen, J., Yang, L., Wang, Z., Meng, W., Yan, G., Zhao, Y., and Liu, Y.: Bayanoboite-(Y), IMA 2023-084, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-085

Skogbyite

$\text{Zr}(\text{Mg}_2\text{Mn}_4^{3+})\text{SiO}_{12}$

Skb

Långban deposit, Filipstad, Värmland, Sweden (59°51'19" N, 14°15'53" E)

Erik Jonsson\*, Ulf Hålenius, Jaroslaw Majka, and Ferdinando Bosi

\* E-mail: [erik.jonsson@sgu.se](mailto:erik.jonsson@sgu.se)

The Mg analogue of gatedalite

Tetragonal:  $I4_1/acd$ ; structure determined

$a = 9.4914(4)$ ,  $c = 18.9875(10)$  Å

5.480(12), 2.740(100), 2.373(11), 2.178(7), 2.163(6), 1.678(31), 1.431(13), 1.089(6)

Type material is deposited in the collections of the Swedish Museum of Natural History, P.O. Box 50 007, 10405 Stockholm, Sweden, catalogue number GEO-NRM20230033

How to cite: Jonsson, E., Hålenius, U., Majka, J., and Bosi, F.: Skogbyite, IMA 2023-085, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-087

Désorite

$\text{Pb}_2(\text{Fe}_6^{3+}\text{Zn})\text{O}_2(\text{PO}_4)_4(\text{OH})_8$

Dso

Schöne Aussicht mine, Dernbach, Westerwaldkreis, Rhineland-Palatinate, Germany (50°27'14" N, 7°46'20" E)

Anthony R. Kampf\*, Gerhard Möhn, and Chi Ma

\* E-mail: [akampf@nhm.org](mailto:akampf@nhm.org)

New structure type

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

$a = 5.4389(7)$ ,  $b = 9.324(1)$ ,  $c = 10.093(1)$  Å,  $\alpha = 109.024(8)$ ,  $\beta = 90.521(6)$ ,  $\gamma = 97.588(7)^\circ$

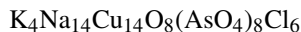
9.492(72), 4.584(100), 3.687(59), 3.307(79), 3.183(90), 2.850(79), 2.707(97), 2.452(50)

Type material is deposited in the collections of Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue number 76300

How to cite: Kampf, A. R., Möhn, G., and Ma, C.: Désorite, IMA 2023-087, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-089

Lebedevite



Ldv

Arsenatnaya fumarole, second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption, Tolbachik volcano, Kamchatka Peninsula, Far Eastern Federal District, Russia (55°41' N, 160°14' E; 1200 m a.s.l.)

Natalia N. Koshlyakova\*, Igor V. Pekov, Atali A. Agakhanov, Emma Bullock, Natalia V. Zubkova, Marina F. Vigasina, Sergey N. Britvin, Peter C. Burns, Robert M. Hazen, and Elena S. Zhitova

\* E-mail: [nkoshlyakova@gmail.com](mailto:nkoshlyakova@gmail.com)

Structurally related to arsmirandite and lehmannite

Tetragonal:  $I4/mmm$ ; structure determined

$$a = 15.0019(5), c = 11.2048(5) \text{ \AA}$$

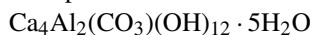
$$10.65(67), 9.03(83), 5.33(61), 2.996(58), 2.675(59), 2.597(100), 2.335(40), 1.923(44)$$

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 6050/1

How to cite: Koshlyakova, N. N., Pekov, I. V., Agakhanov, A. A., Bullock, E., Zubkova, N. V., Vigasina, M. F., Britvin, S. N., Burns, P. C., Hazen, R. M., and Zhitova, E. S.: Lebedevite, IMA 2023-089, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-090

Mampsisite



Mmp

Approximately 2 km southeast of the Hatrurim Junction (road no. 31), Hatrurim Basin, Negev desert, Israel (31°12'30" N, 35°15'30" E)

Sergey N. Britvin\*, Mikhail N. Murashko, Vladimir N. Bocharov, Natalia S. Vlasenko, Oleg S. Vereshchagin, and Yevgeny Vapnik

\* E-mail: [sbritvin@gmail.com](mailto:sbritvin@gmail.com)

Hydrotalcite supergroup

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

$$a = 5.7834(2), b = 9.9274(3), c = 15.0972(4) \text{ \AA}, \\ \alpha = 87.198(2), \beta = 89.805(2), \gamma = 89.967(2)^\circ$$

$$7.58(100), 4.124(8), 3.774(37), 2.845(11), 2.724(14), 2.514(20), 2.451(20), 2.330(14)$$

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 6061/1

How to cite: Britvin, S. N., Murashko, M. N., Bocharov, V. N., Vlasenko, N. S., Vereshchagin, O. S., and Vapnik, Y.: Mampsisite, IMA 2023-090, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-091

Xenotime-(Gd)

Gd(PO<sub>4</sub>)

Xtm-Gd

Zimná Voda vein, Slovenské Rudohorie (Slovak Ore Mountains), 5.6 km south of the village of Prakovce and 400 m northwest of Trohanka bivouac shelter, Košice Region, Slovakia (48°46'01" N, 20°54'47" E; 950 m a.s.l.)

Martin Ondrejka\*, Peter Bačík, Juraj Majzlan, Pavel Uher, Štefan Ferenc, Martin Števko, Mária Čaplovičová, Stanislava Milovská, Tomáš Mikuš, Christiane Rößler, Christian Matthes, and Alexandra Molnárová

\* E-mail: [martin.ondrejka@uniba.sk](mailto:martin.ondrejka@uniba.sk)

Xenotime group

Tetragonal:  $I4_1/amd$

$$a = 6.9589(5), c = 6.0518(6) \text{ \AA}$$

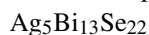
$$4.566(43), 3.479(100), 2.768(18), 2.578(63), 2.460(19), 2.166(20), 1.839(19), 1.780(53)$$

Type material is deposited in the collections of the Slovak National Museum, Natural History Museum, Vajanského nábrežie 2, P.O. Box 13, 81006 Bratislava, Slovakia, catalogue number M20412

How to cite: Ondrejka, M., Bačík, P., Majzlan, J., Uher, P., Ferenc, Š., Števko, M., Čaplovičová, M., Milovská, S., Mikuš, T., Rößler, C., Matthes, C., and Molnárová, A.: Xenotime-(Gd), IMA 2023-091, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-092

Selenodantopaite



Sdnt

On the dumps of the Princ Evžen deposit, near Potůčky, Krušné hory (Ore Mountains), Czech Republic (50°25'34" N, 12°45'03" E)

Jiří Sejkora\*, Cristian Biagioni, Emil Makovický, and Vladimír Šrein

\* E-mail: [jiri.sejkora@nm.cz](mailto:jiri.sejkora@nm.cz)

The Se analogue of dantopaite

Monoclinic:  $C2/m$ ; structure determined

$a = 13.670(4)$ ,  $b = 4.140(1)$ ,  $c = 19.282(6)$  Å,  
 $\beta = 106.38(111)^\circ$

3.700(31), 3.525(38), 3.397(14), 3.359(33), 3.062(21),  
3.037(27), 2.936(100), 2.892(30)

Type material is deposited in the collections of the Department of Mineralogy and Petrology, National Museum, Cirkusová 1740, 19300 Prague 9, Czech Republic, catalogue number PIP 22/2023, and the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 20068

How to cite: Sejkora, J., Biagioni, C., Makovicky, E., and Šrein, V.: Selenodantopaite, IMA 2023-092, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

### IMA no. 2023-094

Lednevite

$\text{Cu}[\text{PO}_3(\text{OH})] \cdot \text{H}_2\text{O}$

Led

Murzinskoe Au deposit, Krasnoshchykovskiy District, Altai Krai, Western Siberia, Russia ( $51^\circ 35' 44''$  N,  $82^\circ 36' 34''$  E)

Anatoly V. Kasatkin\*, Natalia V. Zubkova, Vladislav V. Gurzhiy, Radek Škoda, Fabrizio Nestola, Atali A. Agakhanov, Nikita V. Chukanov, Dmitry I. Belakovskiy, and Dalibor Všíanský

\* E-mail: [anatoly.kasatkin@gmail.com](mailto:anatoly.kasatkin@gmail.com)

Known synthetic analogue

Monoclinic:  $P2_1/a$ ; structure determined

$a = 8.6459(6)$ ,  $b = 6.3951(4)$ ,  $c = 6.8210(5)$  Å,  
 $\beta = 93.866(2)^\circ$

5.135(100), 4.648(33), 3.241(28), 3.095(49), 3.002(20),  
2.891(27), 2.775(53), 2.568(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 6047/1

How to cite: Kasatkin, A. V., Zubkova, N. V., Gurzhiy, V. V., Škoda, R., Nestola, F., Agakhanov, A. A., Chukanov, N. V., Belakovskiy, D. I., and Všíanský, D.: Lednevite, IMA 2023-094, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

## 2 New mineral proposals approved in January 2024

### IMA no. 2019-027a

Geuerite

$\text{Ag}_2\text{Tl}_4\text{Pb}_4\text{As}_{22}\text{S}_{40}$

Geu

Lengenbach quarry, Binntal, Valais, Switzerland ( $46^\circ 21' 54''$  N,  $8^\circ 13' 15''$  E)

Dan Topa\*, Uwe Kolitsch, and Chris Stanley

\* E-mail: [dan.topa@nhm-wien.ac.at](mailto:dan.topa@nhm-wien.ac.at)

Sartorite homologous series

Monoclinic:  $P2_1/c$ ; structure determined

$a = 8.521(2)$ ,  $b = 8.005(2)$ ,  $c = 25.031(5)$  Å,  $\beta = 100.56(3)^\circ$

3.806(52), 3.650(90), 3.005(49), 2.971(76), 2.871(58),  
2.756(100), 2.740(97), 2.130(60)

Type material is deposited in the collections of the Mineralogisch-Petrographische Abteilung, Naturhistorisches Museum, Burgring 7, 1010 Vienna, Austria, catalogue number NHMW-MIN-O1177

How to cite: Topa, D., Kolitsch, U., and Stanley, C.: Geuerite, IMA 2019-027a, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

### IMA no. 2019-071

Reckibachite

$\text{Ag}_2\text{Pb}_{12}\text{As}_{14}\text{Sb}_4\text{S}_{40}$

Rek

Reckibach, Binntal, Valais, Switzerland ( $46^\circ 21' 38''$  N,  $8^\circ 11' 26''$  E)

Dan Topa\*, Berthold Stoeger, Uwe Kolitsch, Ralph Cannon, and Chris Stanley

\* E-mail: [dan.topa@nhm-wien.ac.at](mailto:dan.topa@nhm-wien.ac.at)

Chemically and structurally related to rathite

Monoclinic:  $P2_1/c$ ; structure determined

$a = 8.479(2)$ ,  $b = 7.946(2)$ ,  $c = 25.261(5)$  Å,  $\beta = 100.54(3)^\circ$

3.671(66), 3.103(61), 3.007(64), 2.969(100), 2.745(94),  
2.727(79), 2.329(56), 2.120(80)

Type material is deposited in the collections of the Mineralogisch-Petrographische Abteilung, Naturhistorisches Museum, Burgring 7, 1010 Vienna, Austria, catalogue number NHMW-MIN-O1786

How to cite: Topa, D., Stoeger, B., Kolitsch, U., Cannon, R., and Stanley, C.: Reckibachite, IMA 2019-071, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

### IMA no. 2021-022a

Cafeosite

$\text{Ca}_4\text{Fe}_3^{2+}\text{Fe}_2^{3+}\square\text{O}_6\text{S}_4$

Cfo

Dhofar 225, a carbonaceous chondrite recovered in the desert of Oman

Marina A. Ivanova\*, Sergey N. Britivin, Roza I. Gulyaeva, Sofia A. Petrova, Nina G. Zinovieva, Vladimir V. Kozlov, and Stanislav N. Tyushnyakov

\* E-mail: meteorite2000@mail.ru

Known synthetic analogue

Orthorhombic: *Cmce*

$a = 17.4856(9)$ ,  $b = 11.1516(5)$ ,  $c = 11.1543(5)$  Å  
2.784(25), 2.653(30), 2.343(100), 2.182(16), 1.969(57),  
1.507(35), 1.461(13), 1.392(14)

Type material is deposited in the collections of the Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences, Kosygin St. 19, Moscow 119991, Russia, catalogue number 16185

How to cite: Ivanova, M. A., Britivin, S. N., Gulyaeva, R. I., Petrova, S. A., Zinovieva, N. G., Kozlov, V. V., and Tyushnyakov, S. N.: Cafeosite, IMA 2021-022a, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2022-106a

Nipeiite-(Ce)

$\text{Ce}_9\text{Fe}^{3+}(\text{SiO}_4)_6[\text{SiO}_3(\text{OH})](\text{OH})_3$

Npe-Ce

In a rare earth element (REE) deposit, Taiping, southeast Henan Province, China (33°39'10" N, 111°41'33" E)

Kai Qu\*, Fabrizio Nestola, Cristian Biagioni, Xianzhang Sima, Radek Škoda, Anatoly Kasatkin, Ting Li, Guang Fan, Junping Ren, Wenlong Tang, Jinghui Li, and Yanjuan Wang

\* E-mail: qukai\_tcgs@foxmail.com

Cerite supergroup

Trigonal: *R3c*; structure determined

$a = 10.897(2)$ ,  $c = 38.739(8)$  Å  
4.585(34), 3.508(47), 3.347(37), 3.146(28), 2.994(100),  
2.872(30), 2.724(88), 1.977(35)

Type material is deposited in the collections of the Geological Museum of China, Xisi, Yangrou Hutong No. 16, Beijing 100031, People's Republic of China, catalogue number M16141

How to cite: Qu, K., Nestola, F., Biagioni, C., Sima, X., Škoda, R., Kasatkin, A., Li, T., Fan, G., Ren, J., Tang, W., Li, J., and Wang, Y.: Nipeiite-(Ce), IMA 2022-106a, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-088

Moragite

$\text{Ca}_3\text{TiSi}_2(\text{Al}_2\text{Si})\text{O}_{14}$

Mora

Hatrurim Basin, near Ye'elim Mount, Negev desert, Israel (31°14'21.9" N, 35°16'54.8" E)

Irina Galuskina\*, Biljana Krüger, Yevgeny Vapnik, and Evgeny Galuskin

\* E-mail: irina.galuskina@us.edu.pl

The Al analogue of qeltite

Trigonal: *P321*; structure determined

$a = 7.958(4)$ ,  $c = 4.948(1)$  Å  
6.892(30), 3.101(77), 2.828(100), 2.605(19), 2.305(33),  
2.297(16), 1.911(14), 1.794(22)

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 6060/1

How to cite: Galuskina, I., Krüger, B., Vapnik, Y., and Galuskin, E.: Moragite, IMA 2023-088, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-095

Kvačekite

NiSbSe

Kvč

Bukov mine, near the village of Bukov, 35 km southeast of Nové Město na Moravě, Vysočina Region, Czech Republic (49°27'27.333" N, 16°13'43.224" E)

Petr Pauliš, Zdeněk Dolníček, Jirí Sejkora\*, Ondřej Pour, František Laufek, Jana Ulmanová, and Anna Vymazalová

\* E-mail: jiri.sejkora@nm.cz

The Se analogue of ullmannite

Cubic: *P2<sub>1</sub>3*; structure determined

$a = 6.0901(1)$  Å  
3.046(11), 2.724(100), 2.487(71), 1.863(39), 1.689(16),  
1.628(29), 1.522(7), 1.329(13)

Type material is deposited in the collections of the Department of Mineralogy and Petrology, National Museum, Cirkusová 1740, 19300 Prague 9, Czech Republic, catalogue number P1P 26/2023

How to cite: Pauliš, P., Dolníček, Z., Sejkora, J., Pour, O., Laufek, F., Ulmanová, J., and Vymazalová, A.: Kvačekite, IMA 2023-095, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

#### IMA no. 2023-096

Ferriphoxite

$[(\text{NH}_4)_2\text{K}(\text{H}_2\text{O})][\text{Fe}^{3+}(\text{HPO}_4)_2(\text{C}_2\text{O}_4)]$

Fphx

Rowley mine (125-foot level), about 30 km NNW of Gila Bend, Maricopa Co., Arizona, USA (33°02'57" N, 113°01'50" W)

Anthony R. Kampf\*, Chi Ma, Frank C. Hawthorne, and Joe Marty

\* E-mail: akampf@nhm.org

Same structural units as in carboferriphoxite (IMA no. 2023-097; this newsletter)

Monoclinic: *P2<sub>1</sub>/c*; structure determined

$a = 11.389(5)$ ,  $b = 6.352(3)$ ,  $c = 18.716(9)$  Å,  
 $\beta = 102.887(9)^\circ$   
 11.178(36), 9.202(100), 8.058(47), 5.520(65), 4.614(32),  
 3.191(65), 3.149(36), 3.014(46)

Type 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 76303 (holotype) and 76304 (cotype)

How to cite: Kampf, A. R., Ma, C., Hawthorne, F. C., and Marty, J.: Ferriphoxite, IMA 2023-096, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

### IMA no. 2023-097

Carboferriphoxite  
 $[(\text{NH}_4)\text{K}(\text{H}_2\text{CO}_3)][\text{Fe}^{3+}(\text{HPO}_4)(\text{H}_2\text{PO}_4)(\text{C}_2\text{O}_4)]$   
 Cfp<sub>phx</sub>

Rowley mine (125-foot level), about 30 km NNW of Gila Bend, Maricopa Co., Arizona, USA (33°02'57" N, 113°01'50" W)

Anthony R. Kampf\*, Chi Ma, Frank C. Hawthorne, and Joe Marty

\* E-mail: [akampf@nhm.org](mailto:akampf@nhm.org)

Same structural units as in ferriphoxite (IMA no. 2023-096; this newsletter)

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

$a = 6.4405(3)$ ,  $b = 9.399(5)$ ,  $c = 11.839(6)$  Å,  
 $\alpha = 95.763(10)$ ,  $\beta = 92.314(10)$ ,  $\gamma = 100.665(8)^\circ$   
 11.83(100), 9.17(62), 4.13(21), 3.806(26), 3.200(28),  
 3.154(75), 3.043(32), 2.842(27)

Type 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 76304 (holotype) and 76303 (cotype)

How to cite: Kampf, A. R., Ma, C., Hawthorne, F. C., and Marty, J.: Carboferriphoxite, IMA 2023-097, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

### IMA no. 2023-098

Manganohatertite  
 $\text{NaNaCa}(\text{MnFe}^{3+})(\text{AsO}_4)_3$   
 Mn<sub>h</sub>tt

Arsenatnaya fumarole, second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption, Tolbachik volcano, Kamchatka Peninsula, Far Eastern Federal District, Russia (55°41' N, 160°14' E; 1200 m a.s.l.)

Natalia N. Koshlyakova\*, Igor V. Pekov, Atali A. Agakhanov, Emma Bullock, Dmitry I. Belakovskiy, Natalia V. Zubkova, Nikita V. Chukanov, Sergey N. Britvin, Maria O. Bulakh, Peter C. Burns, Robert M. Hazen, and Elena S. Zhitova

\* E-mail: [nkoshlyakova@gmail.com](mailto:nkoshlyakova@gmail.com)

Alluaudite supergroup

Monoclinic:  $C2/c$ ; structure determined

$a = 12.4557(4)$ ,  $b = 13.0156(3)$ ,  $c = 6.7289(2)$  Å,  $\beta = 113.662(4)^\circ$

6.58(24), 5.72(20), 3.670(35), 3.245(34), 3.023(27),  
 2.903(24), 2.856(100), 2.660(36)

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 6055/1

How to cite: Koshlyakova, N. N., Pekov, I. V., Agakhanov, A. A., Bullock, E., Belakovskiy, D. I., Zubkova, N. V., Chukanov, N. V., Britvin, S. N., Bulakh, M. O., Burns, P. C., Hazen, R. M., and Zhitova, E. S.: Manganohatertite, IMA 2023-098, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

### IMA no. 2023-099

Giuşcăite  
 $\text{Ag}_2\text{Tl}_4\text{Pb}_4\text{As}_{20}\text{Sb}_2\text{S}_{40}$   
 Gic

Lengenbach quarry, Binntal, Valais, Switzerland (46°21'54" N, 8°13'15" E)

Dan Topa\*, Berthold Stoeger, Uwe Kolitsch, Philippe Roth, Frank Keutsch, and Chris Stanley

\* E-mail: [dan.topa@nhm-wien.ac.at](mailto:dan.topa@nhm-wien.ac.at)

Sartorite homologous series

Monoclinic:  $Pn$ ; structure determined

$a = 8.545(3)$ ,  $b = 8.207(3)$ ,  $c = 24.768(8)$  Å,  $\beta = 99.625(3)^\circ$

12.21(55), 4.21(47), 3.890(63), 3.646(100), 2.987(62),  
 2.861(52), 2.785(76), 2.778(69)

Type material is deposited in the collections of the Mineralogisch-Petrographische Abteilung, Naturhistorisches Museum, Burggring 7, 1010 Vienna, Austria, catalogue number NHMW-MIN-O2595

How to cite: Topa, D., Stoeger, B., Kolitsch, U., Roth, P., Keutsch, G., and Stanley, C.: Giuşcăite, IMA 2023-099, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

### IMA no. 2023-100

Ferrimuirite  
 $\text{Ba}_{10}(\text{Ca}_2\text{Fe}_2^{3+})[\text{Si}_8\text{O}_{24}]\text{O}_2\text{Cl}_{10}$   
 Fmui

Gun claim, Itsi Mountain, Yukon, Canada (62°50'50" N, 130°00'51" W)

Inna Lykova\*, Ralph Rowe, Glenn Poirier, Henrik Friis, and Stephanie Barnes

\* E-mail: [ilykova@nature.ca](mailto:ilykova@nature.ca)

The Fe<sup>3+</sup> analogue of muirite

Tetragonal:  $P4mm$ ; structure determined

$a = 13.98983(8)$ ,  $c = 5.58187(6)$  Å

4.364(46), 3.702(49), 3.579(50), 3.499(33), 3.298(39),  
2.899(100), 2.791(39), 2.729(42)

Type material is deposited in the collections of the Canadian Museum of Nature, 240 McLeod Street, Ottawa, Ontario, Canada, catalogue number CMNMC 91404

How to cite: Lykova, I., Rowe, R., Poirier, G., Friis, H., and Barnes, S.: Ferrimuirite, IMA 2023-100, in: CNMNC Newsletter 77, Eur. J. Mineral., 36, <https://doi.org/10.5194/ejm-36-165-2024>, 2024.

### 3 Other issues

#### 3.1 Bukovite: revised formula

Recently, a paper was published (*Journal of Geosciences*, 68, 179–184, 2023) in which the chemical formula of bukovite was revised from Cu<sub>4</sub>Tl<sub>2</sub>Se<sub>4</sub> to (Cu<sub>3</sub>Fe)Tl<sub>2</sub>Se<sub>4</sub> based on a single-crystal structural study. From these data it was shown that copper and thallium occur in bukovite as Cu<sup>+</sup> and Tl<sup>+</sup>; therefore the occurrence of some Fe<sup>3+</sup> partially substituting for Cu<sup>+</sup> at the unique *M* site is necessary for charge balance requirements. This represents a further case of valency-imposed double site occupancy. The chemical formula of bukovite has been modified in the IMA List of Minerals accordingly. This is an executive decision taken by the CNMNC officers.

#### 3.2 Renaming of straßmannite to strassmannite

It was agreed to modify the name straßmannite to strassmannite, with “double s” instead of ß – the so-called “Eszett”, which is peculiar to the German alphabet. This is in keeping with a recent CNMNC resolution (*Mineralogical Magazine*, 87, 225–232, 2023) which aims at rationalizing the mineralogical nomenclature by abolishing Greek letters as well as Arabic and Roman numerals from mineral names. Straßmannite represented the unique case among mineral names in which the Eszett was employed instead of double s. Therefore, for the sake of analogy with fleisstalite, giessenite, günterblässite, mössbauerite, phosphorrösslerite, and rösslerite, the mineral straßmannite – which was approved only 6 years ago – is now renamed strassmannite. This is an executive decision taken by the CNMNC officers.