



IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) – Newsletter 90

Ferdinando Bosi^{1,*}, Frédéric Hatert^{2,**}, Marco Pasero^{3,**}, and Stuart J. Mills^{4,***}

¹Dipartimento di Scienze della Terra, Sapienza Università di Roma,
Piazzale Aldo Moro 5, 00185 Rome, Italy

²Laboratoire de Minéralogie, Université de Liège, Bâtiment B18,
Sart Tilman, 4000 Liège, Belgium

³Dipartimento di Scienze della Terra, Università di Pisa,
Via Santa Maria 53, 56126 Pisa, Italy

⁴Gallery of Natural Art, P.O. Box 830460, Richardson, TX 75083, USA

*Chair, CNMNC

**Vice-Chair, CNMNC

***Secretary, CNMNC

Correspondence: Marco Pasero (marco.pasero@unipi.it)

Published: 28 April 2026

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 2026

IMA no. 2025-090

Magnesiochangesite-(Y)

(Ca₈Y)□Mg(PO₄)₇

Mcgs-Y

Drilled basaltic clast retrieved from the Chang'E-5 mission, the Moon

Xiangkun Ge, Ziyang Li, Chunlai Li, Qin Zhou, Ting Li, Xiangping Gu, Guang Fan*, Saihong Yang, Tao Wang, Liumin Deng, Jing Tan, Zongyao Tai, Yongzhi He, and Jingxuan Cen

* E-mail: fanguang@briug.cn

Cerite supergroup

Trigonal: *R3m*; structure determined

a = 10.412(1), *c* = 18.634(2) Å

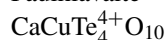
3.209(59), 2.868(100), 2.757(75), 2.600(90), 2.402(31), 2.028(31), 1.929(30), 1.721(45)

Type material is deposited in the collections of the National Astronomical Observatories, Chinese Academy of Sciences, 20A Datun Road, Chaoyang District, Beijing 100101, People's Republic of China, catalogue number CE5Z0407YJFM002GP

How to cite: Ge, X., Li, Z., Li, C., Zhou, Q., Li, T., Gu, X., Fan, G., Yang, S., Wang, T., Deng, L., Tan, J., Tai, Z., He, Y., and Cen, J.: Magnesiochangesite-(Y), IMA 2025-090, in: CNMNC Newsletter 90, Eur. J. Mineral., 38, <https://doi.org/10.5194/ejm-38-231-2026>, 2026.

IMA no. 2025-092

Paulhlavaite



Plh

Lone Pine mine, Wilcox Mining District, Catron Co., New Mexico, USA (33°14'14" N, 108°43'11" W)

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

* E-mail: hyang@arizona.edu

New structure type

Monoclinic: $C2/c$; structure determined

$a = 17.2229(5)$, $b = 5.6140(2)$, $c = 10.1951(3)$ Å,
 $\beta = 98.3211(8)^\circ$

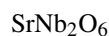
4.630(64), 3.750(55), 3.299(69), 2.988(100), 2.914(34), 2.671(32), 2.325(29), 2.323(29)

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 number 22749 (holotype), and the RRUFF Project, deposition number R250104 (cotype)

How to cite: Yang, H., Jenkins, R. A., Gibbs, R. B., and Downs, R. T.: Paulhlavaite, IMA 2025-092, in: CNMNC Newsletter 90, Eur. J. Mineral., 38, <https://doi.org/10.5194/ejm-38-231-2026>, 2026.

IMA no. 2025-096

Yulinite



Yul

Western part of the Bayan Obo deposit, about 90 km north of the city of Baotou, Guyang County, Inner Mongolia, China (41°48'00" N, 109°53'00" E)

Guanghua Liu, Zhixiang Liu, Jianchao Song, Jingyi Wu, Wenyi Wang, Haiyang Wang, Siyun Li, Zhuqing Ding, and Xiangping Gu*

* E-mail: guxp2004@163.com

Aeschynite group

Monoclinic: $P2_1/c$; structure determined

$a = 7.7184(3)$, $b = 5.5954(2)$, $c = 10.9905(4)$ Å,
 $\beta = 89.772(3)^\circ$

4.951(18), 3.885(18), 3.056(18), 2.791(60), 2.090(12), 1.926(11), 1.747(14), 1.659(18)

Type material is deposited in the collections of the Guanghua Liu's Museum of Natural Heritage, Nanchang City, Jiangxi Province 330100, People's Republic of China, catalogue number GLMNH-2025-YUL001

How to cite: Liu, G., Liu, Z., Song, J., Wu, J., Wang, W., Wang, H., Li, S., Ding, Z., and Gu, X.: Yulinite, IMA 2025-096, in: CNMNC Newsletter 90, Eur. J. Mineral., 38, <https://doi.org/10.5194/ejm-38-231-2026>, 2026.

2 New mineral proposals approved in March 2026

IMA no. 2025-045a

Plechovite



Plc

In a quarry near Jordanów Śląski, Gogołów-Jordanów Serpentinite Massif, Lower Silesia, Poland (50°52'16" N, 16°50'18" E)

Adam Pieczka*, Bożena Gołębiowska, Marcin Stachowicz, Jakub Kotowski, Krzysztof Nejbert, and Frank C. Hawthorne

* E-mail: pieczka@agh.edu.pl

Milarite supergroup

Hexagonal: $P6/mmc$; structure determined

$a = 10.4014(2)$, $c = 13.6982(3)$ Å
6.85(26), 5.20(25), 4.50(36), 4.14(46), 3.42(22), 3.30(100), 3.00(45), 2.86(92)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Leninsky Pr. 18-2, 119071 Moscow, Russia, registration number 6274/1

How to cite: Pieczka, A., Gołębiowska, B., Stachowicz, M., Kotowski, J., Nejbert, K., and Hawthorne, F. C.: Plechovite, IMA 2025-045, in: CNMNC Newsletter 90, Eur. J. Mineral., 38, <https://doi.org/10.5194/ejm-38-231-2026>, 2026.

IMA no. 2025-087

Xianhuaite-(La)



Xhu-La

Eastern pit of the Bayan Obo deposit, northern margin of the North China Craton (NCC), Inner Mongolia, China (41°48'01" N, 109°59'39" E)

Bo Yang, Yuan Xue, Junfang Yu, Ningyue Sun, Li Yang, Guowu Li*, Guoying Yan, Jianyong Liu, Yonggang Zhao, Wenxiang Meng, Zhenyu Chen, Liangliang Zhuang, Ting Li, Tao Wang, Liping Zhao, Yunfang Dong, Zhao Yan, Xinyu Hou, Xin Ao, Maosen Shen, and Ze Liu

* E-mail: liguowu@cugb.edu.cn

The La analogue of xianhuaite-(Ce)

Tetragonal: $P4/mbm$; structure determined

$a = 12.5297(4)$, $c = 3.9249(2)$ Å
3.475(38), 3.215(67), 3.039(74), 2.934(37), 2.802(44),
2.788(100), 2.602(23), 1.962(33)

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 GMCTM2025012 (holotype), and the Crystal Structure Laboratory, China University of Geosciences, Beijing 100083, catalogue number 2025byeb008 (cotype)

How to cite: Yang, B., Xue, Y., Yu, J., Sun, N., Yang, L., Li, G., Yan, G., Liu, J., Zhao, Y., Meng, W., Chen, Z., Zhuang, L., Li, T., Wang, T., Zhao, L., Dong, Y., Yan, Z., Hou, X., Ao, X., Shen, M., and Liu, Z.: Xianhuaite-(La), IMA 2025-087, in: CNMNC Newsletter 90, Eur. J. Mineral., 38, <https://doi.org/10.5194/ejm-38-231-2026>, 2026.

IMA no. 2025-098

Changesite-(Ce)

$(Ca_8Ce)\square Fe(PO_4)_7$

Cgs-Ce

Samples returned from the Chang'E-5 (CE-5) mission, northern Oceanus Procellarum, the Moon (holotype); lunar meteorite Pakepake005, discovered in the Taklamakan Desert, Xinjiang, China (38°50'22" N, 83°42'18" E – cotype) Yanjuan Wang*, Fabrizio Nestola, Kai Qu, Arianna E. Lanza, Jiayang Cong, Xiaochao Che, Zhenyu Chen, Guang Fan, Xiangping Gu, Ze Liu, Cheng Yue, Tao Long, Shuping Yin, Anna Barbaro, Simone Molinari, Ziyao Wang, Zhehao Huang, and Zengqian Hou*

* E-mail: wangyanjuan_cugb@foxmail.com, houzengqian@126.com

Cerite supergroup

Trigonal: $R3c$; structure determined

$a = 10.3513(2)$, $c = 37.0806(5)$ Å
5.173(43), 4.040(16), 3.424(52), 3.182(19), 2.853(100),
2.587(29), 1.918(17), 1.712(15)

Type material is deposited in the collections of the National Astronomical Observatories, Chinese Academy of Sciences, 20A Datun Road, Chaoyang District, Beijing 100101, People's Republic of China, catalogue number CE5C0800YJYX132GP-589 (holotype), and the Geological Museum of China, No. 16, Yangrou Hutong, Xisi, Beijing 100031, People's Republic of China, catalogue number GMCTM2025017 (cotype)

How to cite: Wang, Y., Nestola, F., Qu, K., Lanza, A. E., Cong, J., Che, X., Chen, Z., Fan, G., Gu, X., Liu, Z., Yue, C., Long, T., Yin, S., Barbaro, A., Molinari, S., Wang, Z., Huang, Z., and Hou, Z.: Changesite-(Ce), IMA 2025-098, in: CNMNC Newsletter 90, Eur. J. Mineral., 38, <https://doi.org/10.5194/ejm-38-231-2026>, 2026.

IMA no. 2025-100

Alexshubnikovite

$Ca_2Cu_9(AsO_4)_4(OH)_9Cl(H_2O)_8 \cdot 2H_2O$

Axs

Khovu-Aksy deposit, Chedi-Kholskiy District, Tuva Republic, eastern Siberia, Russia (51°09'35" N, 93°41'09" E)

Anatoly V. Kasatkin*, Jakub Plášil, Kshitij Gurung, Radek Škoda, Nikita V. Chukanov, Atali A. Agakhanov, Dmitry I. Belakovskiy, and Vladislav V. Gurzhiy

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

Isotypic with tyrolite and tangdanite

Monoclinic: $P2/c$; structure determined

$a = 27.112(6)$, $b = 5.523(1)$, $c = 10.433(3)$ Å,
 $\beta = 92.327(4)^\circ$

27.31(100), 13.62(73), 4.839(11), 4.634(12), 4.060(7),
4.012(7), 2.665(12), 2.647(8)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Leninsky Pr. 18-2, 119071 Moscow, Russia, registration number 6305/1

How to cite: Kasatkin, A. V., Plášil, J., Gurung, K., Škoda, R., Chukanov, N. V., Agakhanov, A. A., Belakovskiy, D. I., and Gurzhiy, V. V.: Alexshubnikovite, IMA 2025-100, in: CNMNC Newsletter 90, Eur. J. Mineral., 38, <https://doi.org/10.5194/ejm-38-231-2026>, 2026.

3 Other issues

Not yet published new minerals

We list here those new minerals that have been approved by the CNMNC for more than 5 years and have not yet been published. According to our guidelines any new mineral should be published within 2 years of its approval; otherwise it may be withdrawn. Authors are encouraged to fill the gaps in the mineralogical systematics for which they are responsible as soon as possible. The entries are sorted by date and have the following format:

- Date of approval: mineral (corresponding author)
- Dec 2012: Erzwiesite (Dan Topa)
- Dec 2012: Lopatkaite (Dan Topa)
- Feb 2013: Arsenquatrandorite (Dan Topa)
- Nov 2013: Caesiumpharmacosiderite (Stuart J. Mills)
- Dec 2013: Strontionpharmacosiderite (Stuart J. Mills)
- Mar 2014: Thalliumpharmacosiderite (Mike Rumsey)
- Jul 2014: Znamenskyite (Ilya V. Chaplygin)
- Nov 2014: Hedegaardite (Thomas Witzke)

- Nov 2014: Lefontite (Hexiong Yang)
- Aug 2015: Lislkirchnerite (Herta S. Effenberger)
- Jan 2016: Marklite (Jakub Plášil)
- Jan 2016: Zincobriartite (Andy McDonald)
- Feb 2016: Verberite (Nicolas Meisser)
- Mar 2016: Kalgoorlieite (Kirsten Rempel)
- Apr 2016: Braunerite (Jakub Plášil)
- Jun 2016: Marinaite (Ilya V. Chaplygin)
- Aug 2016: Argentodufrenoyite (Dan Topa)
- Aug 2016: Fleisstalite (Hans-Peter Bojar)
- Aug 2016: Incomsartorite (Dan Topa)
- Aug 2016: Khorixasite (Stuart J. Mills)
- Sep 2016: Molinelloite (Uwe Kolitsch)
- Nov 2016: Magnesiohatertite (Igor V. Pekov)
- Mar 2017: Lagalyite (Thomas Witzke)
- Apr 2017: Betpakdalite-FeFe (Stuart J. Mills)
- Oct 2017: Dekatriasartorite (Dan Topa)
- Nov 2017: Wuyanzhiite (Xiangping Gu)
- Apr 2018: Vaniniite (Nicolas Meisser)
- Sep 2018: Crowningshieldite (Fabrizio Nestola)
- Oct 2018: Ekebergite (Johan Kjellman)
- Oct 2018: Ramaccioniite (Christian Lengauer)
- Nov 2018: Escheite (Fernando Cámara)
- Jan 2019: Llantenite (Christian Lengauer)
- Apr 2019: Scorticoite (Cristian Biagioni)
- Jun 2019: Sangenaroite (Dan Topa)
- Oct 2019: Drechslerite (Dan Topa)
- Jan 2020: Ramosite (Frank N. Keutsch)
- Feb 2020: Dutkevichite-(Ce) (Atali A. Agakhanov)
- Jul 2020: Anastasenkoite (Sergey N. Britvin)
- Aug 2020: Bahariyaite (Hassan M. Helmy)
- Sep 2020: Argentopearceite (Jiří Sejkora)
- Oct 2020: Vargite ((Jörgen Langhof)

- Nov 2020: Kenoargentotennantite-(Fe) (Cristian Biagioni)
- Nov 2020: Nakkaalaaqite (Henrik Friis)

Since a similar list was published a year ago (see CNMNC Newsletter 84), we are pleased to provide an account of those new minerals mentioned in that list and published since then:

May 2014: Spaltiite (Stefan Graeser)

Graeser, S., Topa, D., Effenberger, H., Makovicky, E., Paar, W. H., and Dincă, G.: Spaltiite, $Tl_2Cu_2As_2S_5$, one more new thallium sulfosalt mineral from Lengenbach quarry, Binn, Switzerland, *European Journal of Mineralogy*, 38, 27–37, 2026.

Jul 2014: Keutschite (Dan Topa)

Topa, D., Fredrickson, R. T., Stanley, C., and Din, G.: Keutschite, Cu_2AgAsS_4 , a new mineral with a stannite structure from the Uchucchacua polymetallic deposit, Lima Department, Peru, *European Journal of Mineralogy*, 38, 1–7, 2026.

Aug 2017: Gorbunovite (Atali A. Agakhanov)

Agakhanov, A. A., Pautov, L. A., Pekov, I. V., Karpenko, V. Y., Siidra, O. I., Sokolova, E. V., Hawthorne, F. C., Muftakhov, V. A., and Kasatkin A. V.: Gorbunovite $CsLi_2(Ti,Fe^{3+})(Si_4O_{10})(F,OH,O)_2$ – a new mica supergroup mineral from the Darai-Pioz alkaline massif, Tajikistan, *Mineralogical Magazine*, 89, 694–699, 2025.

Aug 2017: Zoharite (Irina O. Galuskina)

Jun 2019: Gmalimite (Irina O. Galuskina)
Galuskina, I. O., Krüger, B., Galuskin, E. V., Krüger, H., Vapnik, Y., Murashko, M., Banasik, K., and Agakhanov, A. A.: Zoharite, $(Ba,K)_6(Fe,Cu,Ni)_{25}S_{27}$, and gmalimite, $K_6\Box Fe_{24}^{2+}S_{27}$ – new djerfisherite group minerals from gehlenite–wollastonite Paralava, Hatrurim Complex, Israel, *Minerals*, 15, 564, 2025.

May 2018: Achyrophanite (Igor V. Pekov)

Pekov, I. V., Zubkova, N. V., Koshlyakova, N. N., Belakovskiy, D. I., Vigasina, M. F., Agakhanov, A. A., Britvin, S. N., Turchkova, A. G., Sidorov, E. G., Zhegunov, P. S., and Pushcharovsky, D. Y.: Achyrophanite, $(K,Na)_3(Fe^{3+},Ti,Al,Mg)_5O_2(AsO_4)_5$, a new mineral with the novel structure type from fumarolic exhalations of the Tolbachik Volcano, Kamchatka, Russia, *Minerals*, 15, 706, 2025.

Oct 2019: Esdanaite-(Ce) (Thomas E. Gore)

Gore, T. E. and McDonald, A. M.: Esdanaite-(Ce), $NaMnCe(PO_4)_2 \cdot 4H_2O$, a new mineral from Mont Saint-Hilaire, Québec: Characterization, crystal structure deter-

mination, and origin, *Canadian Journal of Mineralogy and Petrology*, 63, 569–579, 2025.

Oct 2019: Grokhovskyite (Victor V. Sharygin)

Sharygin, V. V., Yakovlev, G.A., Seryotkin, Y. V., Karmanov, N. S., Novoselov, K. A., and Karabanalov, M. S.: Grokhovskyite, CuCrS_2 , a new chromium disulfide in Uakit iron meteorite (IIAB), Buryatia, Russia, *Minerals*, 15, 1295, 2025.

Oct 2019: Polyarsite (Igor V. Pekov)

Pekov, I. V., Zubkova, N. V., Agakhanov, A. A., Belakovskiy, D. I., Vigasina, M. F., Yapaskurt, V. O., Britvin, S. N., Turchkova, A. G., Sidorov, E. G., Zhitova, E. S., and Pushcharovsky, D. Y.: Polyarsite, $\text{Na}_7\text{CaMgCu}_2(\text{AsO}_4)_4\text{F}_2\text{Cl}$, a new mineral with unique complex layers in the novel-type crystal structure, *Minerals*, 16, 122, 2026.

Nov 2019: Suenoite (Cristian Biagioni)

Biagioni, C., Bonaccorsi, E., Pasero, M., Hålenius, U., and Bosi, F.: Suenoite, $\square\text{Mn}_2\text{Mg}_5\text{Si}_8\text{O}_{22}(\text{OH})_2$, a new member of the amphibole supergroup from the Scortico–Ravazzone ore deposit (Apuan Alps, Tuscany, Italy), *European Journal of Mineralogy*, 37, 761–772, 2025.