



## IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) NEWSLETTER 50

# New minerals and nomenclature modifications approved in 2019

Ritsuro Miyawaki (Chairman, CNMNC)<sup>1</sup>, Frédéric Hatert (Vice-Chairman, CNMNC)<sup>2</sup>, Marco Pasero (Vice-Chairman, CNMNC)<sup>3\*</sup> and Stuart J. Mills (Secretary, CNMNC)<sup>4</sup>

<sup>1</sup>Department of Geology and Paleontology, National Museum of Nature and Science, 4-1-1 Amakubo, Tsukuba 305-0005, Japan – [miyawaki@kahaku.go.jp](mailto:miyawaki@kahaku.go.jp);

<sup>2</sup>Laboratoire de Minéralogie, Université de Liège, B-4000 Liège, Belgium – [fhatert@uliege.be](mailto:fhatert@uliege.be); <sup>3</sup>Dipartimento di Scienze della Terra, Università di Pisa, Via Santa Maria 53, I-56126 Pisa, Italy – [marco.pasero@unipi.it](mailto:marco.pasero@unipi.it); and <sup>4</sup>Geosciences, Museums Victoria, PO Box 666, Melbourne, Victoria 3001, Australia – [smills@museum.vic.gov.au](mailto:smills@museum.vic.gov.au)

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

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 JUNE 2019

IMA No. 2018-138

Lingbaoite

AgTe<sub>3</sub>

S60 gold-bearing quartz vein, ca. 30 km SW of Lingbao city, Henan province, China (34°24'N, 110°31'E)

Wei Jian\*, Jingwen Mao, Bernd Lehmann, Yanhe Li, Huishou Ye, Jianhui Cai and Zongyan Li

\*E-mail: [jianwei@cags.ac.cn](mailto:jianwei@cags.ac.cn)

Known synthetic analogue

Trigonal: *R3m*; structure determined

$a = 8.645(14)$ ,  $c = 5.272(9)$  Å

3.052(100), 2.161(36), 2.155(50), 1.763(16), 1.757(10), 1.526(9), 1.366(11), 1.363(16)

Type material is deposited in the mineralogical collections of the Institute of Mineral Resources, Chinese Academy of Geological Sciences, Baiwanzhuang Street 26, Beijing, China, catalogue number M13812 (holotype) and the Geological

Museum of China, Yangrouhutong Street 15, Xicheng District, Beijing, China, catalogue number M13812 (cotyp)

How to cite: Jian W., Mao J., Lehmann B., Li Y., Ye H., Cai J. and Li Z. (2019) Lingbaoite, IMA 2018-138. CNMNC Newsletter No. 50; *Mineralogical Magazine*, 83, doi: 10.1180/mgm.2019.46

IMA No. 2019-007

Gmalimite

K<sub>6</sub>□Fe<sub>24</sub>S<sub>27</sub>

Halamish wadi, southern part of the Hatrurim Complex, Negev Desert, Israel (31°09'42"N, 35°17'29"E)

Irina O. Galuskina\*, Biljana Krüger, Evgeny V. Galuskin, Hannes Krüger, Yevgeny Vapnik, Kamila Banasik, Mikhail Murashko, Atali A. Agakhanov and Anuschka Pauluhn

\*E-mail: [irina.galuskina@us.edu.pl](mailto:irina.galuskina@us.edu.pl)

The K analogue of zoharite

Cubic: *Pm3m*; structure determined

$a = 10.34863(8)$  Å

10.357(91), 7.323(33), 5.979(59), 3.123(56), 2.990(58), 2.376(50), 1.831(100), 1.057(14)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences,

\*Author for correspondence: Marco Pasero, Email: [marco.pasero@unipi.it](mailto:marco.pasero@unipi.it)

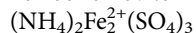
Cite this article: Miyawaki R., Hatert F., Pasero M. and Mills S.J. (2019) New minerals and nomenclature modifications approved in 2019. *Mineralogical Magazine* 83, 615–620. <https://doi.org/10.1180/mgm.2019.46>

Leninskiy Prospekt 18-2, Moscow 119071, Russia, registration number 5297/1

How to cite: Galuskina I.O., Krüger B., Galuskin E.V., Krüger H., Vapnik Y., Banasik K., Murashko M., Agakhanov A.A. and Pauluhn A. (2019) Gmalimite, IMA 2019-007. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-008

Ferroefremovite



“Bocca Grande” fumarole, Solfatara di Pozzuoli, Flegrean Volcanic Complex, Napoli Province, Campania, Italy (40° 49′41″N, 14°8′30″E)

Anatoly V. Kasatkin\*, Jakob Plášil, Radek Škoda, Italo Camprostrini, Nikita V. Chukanov, Atali A. Agakhanov, Vladimir Y. Karpenko and Dmitriy I. Belakovskiy

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

The Fe analogue of efremovite

Cubic:  $P2_13$ ; structure determined

$$a = 10.0484(9) \text{ \AA}$$

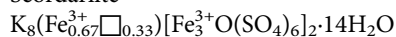
5.80(40), 4.50(20), 4.11(30), 3.17(100), 3.02(20), 2.68(50), 1.86(18), 1.62(18)

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 5368/1

How to cite: Kasatkin A.V., Plášil J., Škoda R., Camprostrini I., Chukanov N.V., Agakhanov A.A., Karpenko V.Y. and Belakovskiy D.I. (2019) Ferroefremovite, IMA 2019-008. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-010

Scordariite



Monte Arsiccio mine, Stazzema (LU), Apuan Alps, Tuscany, Italy (43°58′N, 10°17′E)

Cristian Biagioni\*, Luca Bindi and Daniela Mauro

\*E-mail: [cristian.biagioni@unipi.it](mailto:cristian.biagioni@unipi.it)

Structurally related to metavoltine and carlsonite

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

$$a = 9.7509(4), c = 53.525(2) \text{ \AA}$$

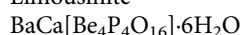
8.8 (mw), 8.3(s), 6.6(m), 4.22(m), 3.777(m), 3.299(m), 3.189(m), 2.884(s)

Type material is deposited in the mineralogical collections of the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 19893

How to cite: Biagioni C., Bindi L. and Mauro D. (2019) Scordariite, IMA 2019-010. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-011

Limousinite



Vilatte-Haute quarry, Chanteloube near Razès, Limousin, Haute-Vienne, France (46°03′55″N, 1°22′03″E)

Frédéric Hatert\*, Nicolas Meisser, Fabrice Dal Bo, Yannick Bruni, Pietro Vignola, Andrea Risplendente, François-Xavier Châtenet and Julien Lebocey

\*E-mail: [fhaterter@ulg.ac.be](mailto:fhaterter@ulg.ac.be)

Structurally related to phillipsite

Monoclinic:  $P2_1/c$ ; structure determined

$$a = 9.4958(4), b = 13.6758(4), c = 13.4696(4) \text{ \AA}, \beta = 90.398(3)^\circ$$

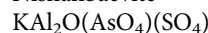
3.89(100), 3.75(60), 3.09(60), 3.01(90), 2.219(50), 2.058(60), 1.879(40), 1.735(40)

Type material is deposited in the mineralogical collections of the Geological Museum of Lausanne, Switzerland, catalogue number MGL 093398, and the Laboratory of Mineralogy, University of Liège, Belgium, catalogue number ULG 21167

How to cite: Hatert F., Meisser N., Dal Bo F., Bruni Y., Vignola P., Risplendente A., Châtenet F.-X. and Lebocey J. (2019) Limousinite, IMA 2019-011. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-012

Nishanbaevite



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 asl)

Igor V. Pekov\*, Natalia V. Zubkova, Vasiliy O. Yapaskurt, Dmitry I. Belakovskiy, Sergey N. Britvin, Atali A. Agakhanov, Anna G. Turchkova, Evgeny G. Sidorov and Dmitry Y. Pushcharovsky

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

New structure type

Orthorhombic:  $Pbcm$ ; structure determined

$$a = 15.487(3), b = 7.258(2), c = 6.601(2) \text{ \AA}$$

15.49(100), 6.56(30), 4.653(29), 3.881(54), 3.625(27), 3.289(52), 3.113(29), 3.038(51)

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 5379/1

How to cite: Pekov I.V., Zubkova N.V., Yapaskurt V.O., Belakovskiy D.I., Britvin S.N., Agakhanov A.A., Turchkova A.G., Sidorov E.G. and Pushcharovsky D.Y. (2019) Nishanbaevite, IMA 2019-012. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-013

Nazarovite



Halamish wadi, southern part of the Hatrurim basin, Negev Desert, Israel (31°9′47″N, 35°17′57″E – holotype); Marjalahti meteorite, fallen June 01, 1902 at the northern coast of the Ladoga see, Karelia, Russia (61°30′N, 30°30′E – cotype)

Sergey N. Britvin\*, Mikhail N. Murashko, Maria G. Krzhizhanovskaya, Oleg S. Vereshchagin, Yevgeny Vapnik, Vladimir V. Shilovskikh and Maksim S. Lozhkin

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

Known synthetic analogue

Tetragonal:  $I4/m$ ; structure determined

$$a = 8.640(1), c = 5.071(3) \text{ \AA}$$

4.374(5), 2.503(5), 2.341(54), 2.160(13), 2.040(15), 1.931(40), 1.860(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 5381/1

How to cite: Britvin S.N., Murashko M.N., Krzhizhanovskaya M.G., Vereshchagin O.S., Vapnik Y., Shilovskikh V.V. and

Lozhkin M.S. (2019) Nazarovite, IMA 2019-013. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-014

Sangenarosite

$\text{Ag}_8(\text{Sb}_{8-x}\text{As}_x)\text{S}_{16}$  ( $0 < x < 2$ )

San Genaro mine, Huancavelica, Peru ( $13^\circ 11' 30.4''\text{S}$ ,  $75^\circ 8' 36.3''\text{W}$ )

Dan Topa\*, Frank N. Keutsch and Chris Stanley

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

The Sb-rich end-member of ferdowsiite

Monoclinic:  $P2_1/n$ ; structure determined

$a = 8.758(2)$ ,  $b = 5.814(1)$ ,  $c = 13.876(3)$  Å,  $\beta = 96.666(3)^\circ$   
 $3.23(97)$ ,  $3.23(94)$ ,  $2.907(78)$ ,  $2.773(100)$ ,  $2.720(90)$ ,  $2.007(62)$ ,  
 $1.986(56)$ ,  $1.944(36)$

Type material is deposited in the mineralogical collections of the Naturhistorisches Museum, Burgring 7, 1010 Wien, Austria, specimen number O 1090

How to cite: Topa D., Keutsch F.N. and Stanley C. (2019) Sangenarosite, IMA 2019-014. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-018

Patynite

$\text{NaKCa}_4[\text{Si}_9\text{O}_{23}]$

Patyn Mt. massif, Tashtagolskiy District, Kemerovo Oblast', Southern Siberia, Russia ( $53^\circ 3' 32''\text{N}$ ,  $88^\circ 44' 29''\text{E}$ )

Anatoly V. Kasatkin\*, Fabrizio Nestola, Nikita V. Chukanov, Radek Škoda, Fernando Cámara, Atali A. Agakhanov, Dmitriy I. Belakovskiy and Vladimir S. Lednyov

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

New structure type

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

$a = 7.2743(1)$ ,  $b = 10.5516(2)$ ,  $c = 13.9851(3)$  Å,  $\alpha = 104.203(2)$ ,  
 $\beta = 104.302(2)$ ,  $\gamma = 92.028(1)^\circ$   
 $4.947(13)$ ,  $3.454(100)$ ,  $3.262(66)$ ,  $3.103(64)$ ,  $2.931(16)$ ,  $2.801(21)$ ,  
 $2.592(18)$ ,  $1.820(28)$

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 5369/1

How to cite: Kasatkin A.V., Nestola F., Chukanov N.V., Škoda R., Cámara F., Agakhanov A.A., Belakovskiy D.I. and Lednyov V.S. (2019) Patynite, IMA 2019-018. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2018-123a

Taipingite-(Ce)

$(\text{Ce}^{3+}\text{Ca}_2)_{\Sigma 9}\text{Mg}(\text{SiO}_4)_3[\text{SiO}_3(\text{OH})]_4\text{F}_3$

Taiping town deposit, North Qinling Orogen, southeast Henan Province, China ( $33^\circ 39' 10''\text{N}$ ,  $111^\circ 41' 33''\text{E}$ )

Kai Qu\*, Xianzhang Sima, Guang Fan, Guowu Li, Ganfu Shen, Huakai Chen, Xing Liu, Qingqing Yin, Ting Li and Yanjuan Wang

\*E-mail: [qukai\\_tcgs@foxmail.com](mailto:qukai_tcgs@foxmail.com)

Cerite group

Trigonal:  $R3c$ ; structure determined

$a = 10.7246(3)$ ,  $c = 37.953(1)$  Å  
 $4.518(50)$ ,  $3.455(95)$ ,  $3.297(85)$ ,  $3.098(35)$ ,  $2.941(100)$ ,  $2.683(65)$ ,  
 $1.945(40)$ ,  $1.754(40)$

Type material is deposited in the mineralogical collection of the Geological Museum of China, No. 16, Yangrou Hutong, Xisi, Beijing 100031, People's Republic of China, catalogue number M16084

How to cite: Qu K., Sima X., Fan G., Li G., Shen G., Chen H., Liu X., Yin Q., Li T. and Wang Y. (2019) Taipingite-(Ce), IMA 2018-123a. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

### NEW MINERAL PROPOSALS APPROVED IN JULY 2019

#### IMA No. 2019-017

Dritsite

$\text{Li}_2\text{Al}_4(\text{OH})_{12}\text{Cl}_2 \cdot 3\text{H}_2\text{O}$

Drillcore of borehole #2001 (depth 248 m), Romanovskiy area of the Verkhnekamskoe potassium salt deposit, 30 km S of the city of Berezniki, Perm Krai, Western Urals, Russia

Elena S. Zhitova, Igor V. Pekov, Ilya I. Chaikovskiy, Elena P. Chirkova, Vasilii O. Yapaskurt, Yana V. Bychkova, Dmitry I. Belakovskiy, Nikita V. Chukanov, Natalia V. Zubkova, Sergey V. Krivovichev and Vladimir N. Bocharov

\*E-mail: [zhitova\\_es@mail.ru](mailto:zhitova_es@mail.ru)

Hydrotalcite supergroup

Hexagonal:  $P6_3/mcm$ ; structure determined

$a = 5.0960(3)$ ,  $c = 15.358(1)$  Å  
 $7.68(100)$ ,  $4.422(61)$ ,  $3.832(99)$ ,  $2.561(30)$ ,  $2.283(25)$ ,  $1.963(19)$ ,  
 $1.807(20)$ ,  $1.445(26)$

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 5380/1

How to cite: Zhitova E.S., Pekov I.V., Chaikovskiy I.I., Chirkova E.P., Yapaskurt V.O., Bychkova Y.V., Belakovskiy D.I., Chukanov N.V., Zubkova N.V., Krivovichev S.V. and Bocharov V.N. (2019) Dritsite, IMA 2019-017. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-019

Hiroseite

$\text{FeSiO}_3$

Suizhou meteorite, fallen in Dayanpo, 12.5 km SE of the Suizhou city, Hubei province, China

Luca Bindi\* and Xiande Xie

\*E-mail: [luca.bindi@unifi.it](mailto:luca.bindi@unifi.it)

The Fe analogue of bridgmanite

Orthorhombic:  $Pnma$ ; structure determined

$a = 5.0016(5)$ ,  $b = 7.0031(3)$ ,  $c = 4.8460(3)$  Å  
 $2.591(16)$ ,  $2.468(56)$ ,  $2.423(18)$ ,  $1.751(68)$ ,  $1.740(100)$ ,  $1.434(26)$ ,  
 $1.407(33)$ ,  $1.231(27)$

Type material is deposited in the mineralogical collections of the Museo di Storia Naturale, Università di Firenze, Via La Pira 4, I-50121, Firenze, Italy, catalogue number 3238/I

How to cite: Bindi L. and Xie X. (2019) Hiroseite, IMA 2019-019. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-020

Monchetundraite

$\text{Pd}_2\text{NiTe}_2$

Borehole 1819 (depth 101 m), Monchetundra layered Intrusion, Kola Peninsula, Russia ( $67^\circ 52' 22''\text{N}$ ,  $32^\circ 47' 60''\text{E}$ )

Anna Vymazalová\*, František Laufek, Tatiana L. Grokhovskaya and Chris J. Stanley

\*E-mail: [anna.vymazalova@geology.cz](mailto:anna.vymazalova@geology.cz)

Known synthetic analogue

Orthorhombic: *Ibam*

$a = 6.31$ ,  $b = 11.25$ ,  $c = 5.17$  Å

X-ray powder diffraction not available

Type material is deposited in the mineralogical collections of the Department of Earth Sciences, Natural History Museum, London SW7 5BD, UK, catalogue number BM2019,2

How to cite: Vymazalová A., Laufek F., Grokhovskaya T.L. and Stanley C.J. (2019) Monchetundraite, IMA 2019-020. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-021

Maletoyvayamite

$\text{Au}_3\text{Se}_4\text{Te}_6$

Gaching occurrence, Maletoyvayam ore field, southwestern part of the Koryak Highland, central Kamchatka volcanic belt, Far East Region, Russia (60°19'51.87"N, 164°46'25.65"E) Nadhezda D. Tolstykh, Marek Tuhý\*, Anna Vymazalová, Jakub Plášil, František Laufek, Anatoly V. Kasatkin and Fabrizio Nestola

\*E-mail: [marek.tuh@geology.cz](mailto:marek.tuh@geology.cz)

Known synthetic analogue

Triclinic: *P* $\bar{1}$

$a = 8.901(2)$ ,  $b = 9.045(1)$ ,  $c = 9.265(4)$  Å,  $\alpha = 97.66(3)$ ,  $\beta = 106.70(2)$ ,  $\gamma = 101.40(1)^\circ$

8.650(25), 4.331(5), 2.911(100), 2.223(7), 2.180(6), 1.930(8), 1.901(8), 1.725(6)

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 5369/1

How to cite: Tolstykh N.D., Tuhý M., Vymazalová A., Plášil J., Laufek F., Kasatkin A.V. and Nestola F. (2019) Maletoyvayamite, IMA 2019-021. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-022

Bianchiniite

$\text{Ba}_2(\text{TiV})(\text{As}_2\text{O}_5)_2\text{OF}$

Sant'Olga tunnel, Monte Arsiccio mine, Stazzema (LU), Apuan Alps, Tuscany, Italy (43°58'N, 10°17'E)

Cristian Biagioni\*, Marco Pasero, Ulf Hålenius and Ferdinando Bosi

\*E-mail: [cristian.biagioni@unipi.it](mailto:cristian.biagioni@unipi.it)

New structure type

Tetragonal: *I4/mcm*; structure determined

$a = 8.7301(3)$ ,  $c = 15.6653(5)$  Å

3.826(w), 3.144(vs), 2.916(w), 2.789(w), 2.598(w), 2.119(w), 2.072(w), 1.975(w)

Type material is deposited in the mineralogical collections of the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 19892

How to cite: Biagioni C., Pasero M., Hålenius U. and Bosi F. (2019) Bianchiniite, IMA 2019-022. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-023

Halilsarpite

$[\text{Mg}(\text{H}_2\text{O})_6][\text{CaAs}_2^{3+}(\text{Fe}_{2.67}^{3+}\text{Mo}_{0.33}^{6+})(\text{AsO}_4)_2\text{O}_7]$

Oumlil mine, Bou Azzer district, Morocco (30°31'22"N, 6°47'6"W)

Ian E. Grey\*, Tomas Husdal, Henrik Friis, Fabrice Dal Bo, Anthony R. Kampf, Colin M. MacRae, W. Gus Mumme, Ole-Thorstein Ljøstad and Finlay Shanks

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

Isostructural with natrowalentaite

Orthorhombic: *Imma*; structure determined

$a = 26.489(1)$ ,  $b = 7.4205(3)$ ,  $c = 10.4378(4)$  Å

13.28(100), 9.710(16), 6.737(20), 6.042(18), 4.462(33), 3.018(36), 2.944(11), 2.799(14)

Type material is deposited in the mineralogical collections of the Natural History Museum, University of Oslo, PO 1172, Blindern, 0318 Oslo, Norway, registration number 44110 (holotype), and the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue number 73567 (cotype)

How to cite: Grey I.E., Husdal T., Friis H., Dal Bo F., Kampf A.R., MacRae C.M., Mumme W.G., Ljøstad O.-T. and Shanks F. (2019) Halilsarpite, IMA 2019-023. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-024

Minakawaite

RhSb

Haraigawa, Misato machi, Kumamoto Prefecture, Kyushu Province, Japan

Daisuke Nishio-Hamane\* and Takahiro Tanaka

\*E-mail: [hamane@issp.u-tokyo.ac.jp](mailto:hamane@issp.u-tokyo.ac.jp)

The Sb analogue of cherepanovite

Orthorhombic: *Pnma*

$a = 5.934(7)$ ,  $b = 3.848(3)$ ,  $c = 6.305(4)$  Å

2.860(63), 2.774(35), 2.250(47), 2.199(100), 2.162(38), 1.923(49), 1.843(51), 1.584(28)

Type material is deposited in the mineralogical collections of the National Museum of Nature and Science, Tsukuba, Japan, specimen number NSM-46296 (holotype) and NSM-46297 (cotype)

How to cite: Nishio-Hamane D. and Tanaka T. (2019) Minakawaite, IMA 2019-024. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-025

Magnesian-lucchesiite

$\text{CaMg}_3\text{Al}_6(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3\text{O}$

Within a lamprophyre dyke, near the O'Grady batholith, Northwest Territories, Canada (62°46'8.33"N, 128°56'9.07"W) Emily D. Scribner\*, Jan Cempírek, Lee A. Groat and R. James Evans

\*E-mail: [escribne@eoas.ubc.ca](mailto:escribne@eoas.ubc.ca)

Tourmaline supergroup

Trigonal: *R3m*; structure determined

$a = 15.9910(3)$ ,  $c = 7.2224(2)$  Å

6.404(32), 4.238(54), 3.998(58), 3.494(46), 2.972(70), 2.586(100), 2.048(46), 1.926(29)

Type material is deposited in the mineralogical collections of the Canadian Museum of Nature, 240 McLeod St, Ottawa, ON K2P 2R1, Canada, reference number CMNMC 87266

How to cite: Scribner E.D., Cempírek J., Groat L.A. and Evans R.J. (2019) Magnesio-lucchesiite, IMA 2019-025. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-026

Navrotskyite

$K_2Na_{10}(UO_2)_3(SO_4)_9 \cdot 2H_2O$

Blue Lizard mine, Red Canyon, White Canyon District, San Juan Co., Utah, USA (37°33'26"N, 110°17'48"W)

Travis A. Olds\*, Anthony R. Kampf, Samuel L. Perry, Xiaofeng Guo, Joe Marty, Timothy P. Rose and Peter C. Burns

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

Structurally related to meisserite and ferriite

Orthorhombic: *Pbcm*; structure determined

$a = 5.446(1)$ ,  $b = 21.328(5)$ ,  $c = 33.439(8)$  Å

10.70(43), 5.59(27), 5.28(100), 3.845(36), 3.533(29), 3.225(30), 3.050(44), 2.822(29)

Cotype 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 73574, 73575 and 73576

How to cite: Olds T.A., Kampf A.R., Perry S.L., Guo X., Marty J., Rose T.P. and Burns P.C. (2019) Navrotskyite, IMA 2019-026. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-028

Hingganite-(Nd)

$Nd_2\Box Be_2Si_2O_8(OH)_2$

Zagi Mountain, near Kafoor Dheri, ca. 4 km S of Warsak and 30 km NW of Peshawar, Khyber Pakhtunkhwa Province, Pakistan (34°9'N, 71°24'E)

Anatoly V. Kasatkin\*, Fabrizio Nestola, Radek Škoda, Nikita V. Chukanov, Atali A. Agakhanov, Dmitriy I. Belakovskiy, Arianna Lanza and Markéta Holá

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

Gadolinite supergroup

Monoclinic:  $P2_1/c$ ; structure determined

$a = 4.7719(1)$ ,  $b = 7.6422(2)$ ,  $c = 9.9299(2)$  Å,  $\beta = 89.851(2)^\circ$   
6.105(95), 4.959(56), 4.773(100), 3.462(58), 3.122(68), 3.028(61), 2.864(87), 2.573(89)

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 5370/1

How to cite: Kasatkin A.V., Nestola F., Škoda R., Chukanov N.V., Agakhanov A.A., Belakovskiy D.I., Lanza A. and Holá M. (2019) Hingganite-(Nd), IMA 2019-028. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

#### IMA No. 2019-030

Metauroxite

$(UO_2)_2(C_2O_4)(OH)_2(H_2O)_2$

Burro mine, Slick Rock district, San Miguel Co., Colorado, USA (38°2'42"N, 108°53'23"W)

Anthony R. Kampf\*, Jakub Plášil, Barbara P. Nash and Joe Marty

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

Known synthetic analogue

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

$a = 5.5635(3)$ ,  $b = 6.1152(4)$ ,  $c = 7.8283(4)$  Å,  $\alpha = 85.572(5)$ ,  $\beta = 89.340(4)$ ,  $\gamma = 82.468(5)^\circ$   
6.06(45), 5.52(33), 4.97(34), 4.52(100), 3.888(80), 3.748(22), 3.180(51), 2.604(32)

Cotype 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 67289 and 67290

How to cite: Kampf A.R., Plášil J., Nash B.P. and Marty J. (2019) Metauroxite, IMA 2019-030. CNMNC Newsletter No. 50; *Mineralogical Magazine*, **83**, doi: 10.1180/mgm.2019.46

### NOMENCLATURE/CLASSIFICATION PROPOSALS APPROVED IN JUNE 2019

#### IMA 16-F: Changes to CNMNC procedures regarding combustion products forming on burning coal dumps

Proposal 16-F is accepted. Crystal phases forming on the burning coal dumps with no human agency initiating the fire and no anthropogenic material deposited there should be treated as minerals.

#### IMA 19-C: Establishing a new class of type specimen – Anthropotype

Proposal 19-C is accepted. Synthetic analogues, used to justify the existence of a new mineral species or to obtain the missing properties required for a new mineral characterisation, are designated as anthropotypes. These anthropotypes should be registered and stored in museums, and made available for study just like naturally occurring type specimens.

### POLISH-UP OF THE IMA LIST OF MINERALS

We are making effective a number of minor changes in the chemical formulae of minerals which, in their current form, have been inherited from previous IMA-approved compilations. In most cases the change merely consists in the elimination of subordinate constituents occurring within the same parentheses together with the dominant constituent. Minerals marked as Q (questionable) in the IMA List of Minerals were not considered, since these should deserve a more detailed re-appraisal. Similarly, minerals belonging to a supergroup for which the IMA-CNMNC approved a comprehensive report were left behind, too, as those formulae have been already discussed and agreed by a dedicated subcommittee. This is an executive decision taken by the officers of the IMA-CNMNC.

#### Alpersite

Current formula:  $(Mg,Cu)(SO_4) \cdot 7H_2O$

New formula:  $Mg(SO_4) \cdot 7H_2O$

#### Alvanite

Current formula:  $(Zn,Ni)Al_4(VO_3)_2(OH)_{12} \cdot 2H_2O$

New formula:  $ZnAl_4(V^{5+}O_3)_2(OH)_{12} \cdot 2H_2O$

#### Amakinite

Current formula:  $(Fe^{2+},Mg)(OH)_2$

New formula:  $Fe(OH)_2$

**Ammonioleucite***Current formula:* (NH<sub>4</sub>,K)(AlSi<sub>2</sub>O<sub>6</sub>)*New formula:* (NH<sub>4</sub>)(AlSi<sub>2</sub>O<sub>6</sub>)**Aurorite***Current formula:* (Mn<sup>2+</sup>,Ag,Ca)Mn<sub>3</sub><sup>4+</sup>O<sub>7</sub>·3H<sub>2</sub>O*New formula:* Mn<sup>2+</sup>Mn<sub>3</sub><sup>4+</sup>O<sub>7</sub>·3H<sub>2</sub>O**Biphosphammite***Current formula:* (NH<sub>4</sub>,K)H<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>*New formula:* (NH<sub>4</sub>)H<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>**Bredigite***Current formula:* (Ca,Ba)Ca<sub>13</sub>Mg<sub>2</sub>(SiO<sub>4</sub>)<sub>8</sub>*New formula:* Ca<sub>7</sub>Mg(SiO<sub>4</sub>)<sub>4</sub>**Chayesite***Current formula:* K(Mg,Fe<sup>2+</sup>)<sub>4</sub>Fe<sup>3+</sup>[Si<sub>12</sub>O<sub>30</sub>]*New formula:* KMg<sub>4</sub>Fe<sup>3+</sup>[Si<sub>12</sub>O<sub>30</sub>]**Chenevixite–Luetheite***Current formula:* Cu(Fe<sup>3+</sup>,Al)(AsO<sub>4</sub>)(OH)<sub>2</sub> (chenevixite)*Current formula:* Cu<sub>2</sub>Al<sub>2</sub>(AsO<sub>4</sub>)<sub>2</sub>(OH)<sub>4</sub>·H<sub>2</sub>O (luetheite)*New formula:* CuFe<sup>3+</sup>(AsO<sub>4</sub>)(OH)<sub>2</sub> (chenevixite)*New formula:* CuAl(AsO<sub>4</sub>)(OH)<sub>2</sub> (luetheite)**Ferrokösterite***Current formula:* Cu<sub>2</sub>(Fe,Zn)SnS<sub>4</sub>*New formula:* Cu<sub>2</sub>FeSnS<sub>4</sub>**Hibonite–Hibonite-(Fe)***Current formula:* (Ca,Ce)(Al,Ti,Mg)<sub>12</sub>O<sub>19</sub> (hibonite)*Current formula:* (Fe,Mg)Al<sub>12</sub>O<sub>19</sub> (hibonite-(Fe))*New formula:* CaAl<sub>12</sub>O<sub>19</sub> (hibonite)*New formula:* FeAl<sub>12</sub>O<sub>19</sub> (hibonite-(Fe))**Karenwebberite***Current formula:* Na(Fe<sup>2+</sup>,Mn<sup>2+</sup>)(PO<sub>4</sub>)<sub>2</sub>*New formula:* NaFe<sup>2+</sup>(PO<sub>4</sub>)<sub>2</sub>**Kolwezite***Current formula:* (Cu,Co)<sub>2</sub>(CO<sub>3</sub>)(OH)<sub>2</sub>*New formula:* CuCo(CO<sub>3</sub>)(OH)<sub>2</sub>**Laphamite***Current formula:* As<sub>2</sub>(Se,S)<sub>3</sub>*New formula:* As<sub>2</sub>Se<sub>3</sub>**Mgriite***Current formula:* (Cu,Fe)<sub>3</sub>AsSe<sub>3</sub>*New formula:* Cu<sub>3</sub>AsSe<sub>3</sub>**Mozgovaite***Current formula:* PbBi<sub>4</sub>(S,Se)<sub>7</sub>*New formula:* PbBi<sub>4</sub>S<sub>7</sub>**Nolanite***Current formula:* (V<sup>3+</sup>,Fe<sup>3+</sup>,Fe<sup>2+</sup>)<sub>10</sub>O<sub>14</sub>(OH)<sub>2</sub>*New formula:* V<sub>8</sub><sup>3+</sup>Fe<sub>2</sub><sup>3+</sup>O<sub>14</sub>(OH)<sub>2</sub>**Okhotskite***Current formula:* Ca<sub>2</sub>(Mn,Mg)(Mn<sup>3+</sup>,Al,Fe<sup>3+</sup>)<sub>2</sub>(Si<sub>2</sub>O<sub>7</sub>)(SiO<sub>4</sub>)(OH)<sub>2</sub>·H<sub>2</sub>O*New formula:* Ca<sub>2</sub>Mn<sup>2+</sup>Mn<sub>2</sub><sup>3+</sup>(Si<sub>2</sub>O<sub>7</sub>)(SiO<sub>4</sub>)(OH)<sub>2</sub>·H<sub>2</sub>O**Poppiite***Current formula:* Ca<sub>2</sub>(V<sup>3+</sup>,Fe<sup>3+</sup>,Mg)V<sub>2</sub><sup>3+</sup>(Si,Al)<sub>3</sub>(O,OH)<sub>14</sub>*New formula:* Ca<sub>2</sub>V<sup>3+</sup>V<sub>2</sub><sup>3+</sup>(Si<sub>2</sub>O<sub>7</sub>)(SiO<sub>4</sub>)(OH,O)<sub>2</sub>·H<sub>2</sub>O**Pumpellyite-(Fe<sup>3+</sup>)***Current formula:* Ca<sub>2</sub>(Fe<sup>3+</sup>,Mg)Al<sub>2</sub>(Si<sub>2</sub>O<sub>7</sub>)(SiO<sub>4</sub>)(OH,O)<sub>2</sub>·H<sub>2</sub>O*New formula:* Ca<sub>2</sub>Fe<sup>3+</sup>Al<sub>2</sub>(Si<sub>2</sub>O<sub>7</sub>)(SiO<sub>4</sub>)(OH,O)<sub>2</sub>·H<sub>2</sub>O**Purpurite***Current formula:* (Mn<sup>3+</sup>,Fe<sup>3+</sup>)(PO<sub>4</sub>)<sub>2</sub>*New formula:* Mn<sup>3+</sup>(PO<sub>4</sub>)<sub>2</sub>**Rémondite-(Ce)–Rémondite-(La)***Current formula:* Na<sub>3</sub>(Ce,La,Ca,Na,Sr)<sub>3</sub>(CO<sub>3</sub>)<sub>5</sub> (rémondite-(Ce))*Current formula:* Na<sub>3</sub>(La,Ce,Ca)<sub>3</sub>(CO<sub>3</sub>)<sub>5</sub> (rémondite-(La))*New formula:* Na<sub>3</sub>(Ce,Ca,Na)<sub>3</sub>(CO<sub>3</sub>)<sub>5</sub> (rémondite-(Ce))*New formula:* Na<sub>3</sub>(La,Ca,Na)<sub>3</sub>(CO<sub>3</sub>)<sub>5</sub> (rémondite-(La))**Selenostephanite***Current formula:* Ag<sub>5</sub>Sb(Se,S)<sub>4</sub>*New formula:* Ag<sub>5</sub>SbSe<sub>4</sub>**Siderotil***Current formula:* (Fe,Cu)(SO<sub>4</sub>)·5H<sub>2</sub>O*New formula:* Fe(SO<sub>4</sub>)·5H<sub>2</sub>O**Triplite–Zwieselite***Current formula:* (Mn<sup>2+</sup>,Fe<sup>2+</sup>)<sub>2</sub>(PO<sub>4</sub>)F (triplite)*Current formula:* Fe<sup>2+</sup>Mn<sup>2+</sup>(PO<sub>4</sub>)F (zwieselite)*New formula:* Mn<sub>2</sub><sup>2+</sup>(PO<sub>4</sub>)F (triplite)*New formula:* Fe<sub>2</sub><sup>2+</sup>(PO<sub>4</sub>)F (zwieselite)**Tsnigriite***Current formula:* Ag<sub>9</sub>SbTe<sub>3</sub>(S,Se)<sub>3</sub>*New formula:* Ag<sub>9</sub>SbTe<sub>3</sub>S<sub>3</sub>**Vanackerite***Current formula:* Pb<sub>4</sub>Cd(AsO<sub>4</sub>)<sub>3</sub>(Cl,OH)*New formula:* Pb<sub>4</sub>Cd(AsO<sub>4</sub>)<sub>3</sub>Cl