



## IMA Commission on New Minerals, Nomenclature and Classification (CNMNC) Newsletter 35

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### NEW MINERALS AND NOMENCLATURE MODIFICATIONS APPROVED IN 2016 AND 2017

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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

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 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 DECEMBER 2016

#### IMA No. 2016-083

Potassic-magnesian-arfvedsonite

$\text{KNa}_2\text{Mg}_4\text{Fe}^{3+}\text{Si}_8\text{O}_{22}(\text{OH})_2$

Buhovo-Seslavtsi pluton, Sofia district, Bulgaria  
(42°47'N, 23°34'E)

Momchil Dyulgerov\*, Bernard Platevoet, Roberta Oberti, Milen Kadiyski and Ventsislav Rusanov

\*E-mail: momchil@gea.uni-sofia.bg

Amphibole supergroup

Monoclinic:  $C2/m$ ; structure determined

$a = 9.986(2)$ ,  $b = 18.022(3)$ ,  $c = 5.3151(12)$  Å,  
 $\beta = 104.44(2)^\circ$

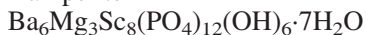
8.519(87), 3.406(82), 3.172(72), 2.755(59), 2.716(100), 2.594(52), 2.551(68), 2.175(57)

Type material is deposited in the collections of the Museum of Mineralogy, Petrology and Economic Geology, Sofia University 'St. Kliment Ohridski', 15 Tsar Osvoboditel Blvd, Sofia 1504, Bulgaria, catalogue number M 7661

How to cite: Dyulgerov, M., Platevoet, B., Oberti, R., Kadiyski, M., Rusanov, V. (2017): Potassic-magnesian-arseniferous, IMA 2016-083. CNMNC Newsletter No. 35, February 2017, page 149; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-084

Kampelite



Iron open pit, Kovdor massif, Murmansk Region, Russia (67°33'N, 30°30'E)

Victor N. Yakovenchuk, Gregory Y. Ivanyuk, Yakov A. Pakhomovsky, Taras L. Panikorovskii, Sergei N. Britvin, Sergey V. Krivovichev\*, Vladimir V. Shilovskikh and Vladimir N. Bocharov

\*E-mail: s.krivovichev@spbu.ru

New structure type

Orthorhombic: *Pnma*; structure determined

$a = 11.2261(9)$ ,  $b = 8.5039(6)$ ,  $c = 27.699(2)$  Å

15.80(100), 13.86(45), 3.292(11), 3.184(18), 3.129(19), 3.022(14), 2.756(16), 2.688(24)

Type material is deposited in the collections of the Mineralogical museum, St. Petersburg State University, Russia, catalogue No. 1/19660

How to cite: Yakovenchuk, V.N., Ivanyuk, G.Y., Pakhomovsky, Y.A., Panikorovskii, T.L., Britvin, S.N., Krivovichev, S.K., Shilovskikh, V.V., Bocharov, V.N. (2017): Kampelite, IMA 2016-084. CNMNC Newsletter No. 35, February 2017, page 150; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-085

Hemleyite



Suizhou (L6 chondrite) meteorite, Suizhou Co., Hubei, China (31°43'N, 113°23'E)

Luca Bindi\*, Ming Chen and Xiande Xie

\*E-mail: luca.bindi@unifi.it

Ilmenite group

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

$a = 4.7483(5)$ ,  $c = 13.665(1)$  Å

3.520(35), 2.625(100), 2.376(50), 2.105(50), 1.762(25), 1.645(50), 1.415(10), 1.372(20)

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., Chen, M., Xie, X. (2017): Hemleyite, IMA 2016-085. CNMNC Newsletter No. 35, February 2017, page 150; *European Journal of Mineralogy*, **29**, 149–152.

### NEW MINERAL PROPOSALS APPROVED IN JANUARY 2017

#### IMA No. 2016-086

Palladogermanide

Pd<sub>2</sub>Ge

Marathon deposit, Coldwell Complex, Ontario, Canada (48°48'7"N, 86°18'35"W)

Andrew M. McDonald\*, William Zhe, Doreen E. Ames, Kirk C. Ross, Ingrid M. Kjarsgaard and David J. Good

\*E-mail: amcdonald@laurentian.ca

Related to marathonite (IMA 2016-080)

Hexagonal:  $P\bar{6}2m$

$a = 6.712(1)$ ,  $c = 3.408(1)$  Å

2.392(100), 2.211(58), 2.197(43), 1.937(34), 1.846(16), 1.704(16), 1.280(13), 1.242(18)

Type material is deposited in the mineralogical collections of the Canadian Museum of Nature, Gatineau, Quebec, Canada, catalogue number CMNMC 87179

How to cite: McDonald, A.M., Zhe, W., Ames, D.E., Ross, K.C., Kjarsgaard, I.M., Good, D.J. (2017): Palladogermanide, IMA 2016-086. CNMNC Newsletter No. 35, February 2017, page 150; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-087

Fupingquite



Nancy pegmatite, Chacabuco Department, San Luis Province, Argentina (32°28'48"S, 65°16'42"W)

Hexiong Yang\*, Robert T. Downs, Xiangping Gu, Xiande Xie and Anaïs Kobsch

\*E-mail: hyang@email.arizona.edu

Wyllieite group

Monoclinic:  $P2_1/n$ ; structure determined

$a = 11.9951(3)$ ,  $b = 12.5217(3)$ ,  $c = 6.4260(2)$  Å,

$\beta = 114.640(1)^\circ$

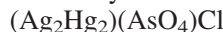
3.488(28), 3.070(98), 2.919(34), 2.873(83), 2.834(55), 2.713(100), 2.517(87), 2.088(79)

Cotype material is deposited in the collections of the Mineral Museum, University of Arizona, Tucson, USA, catalogue # 21322, and the RRUFF Project, deposition # R160052

How to cite: Yang, H., Downs, R.T., Gu, X., Xie, X., Kobsch, A. (2017): Fupingquite, IMA 2016-087. CNMNC Newsletter No. 35, February 2017, page 150; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-088

Rudabányaite



Adolf mine, Rudabánya ore deposit, Borsod-Abaúj-Zemplén Co., Hungary

Sándor Szakáll\*, Herta Effenberger, Béla Fehér and Norbert Zajzon

\*E-mail: askszs@uni-miskolc.hu

New structure type

Cubic:  $F\bar{4}3c$ ; structure determined

$a = 17.360(3)$  Å

5.00(m), 4.33(mw), 2.931(s), 2.882(w), 2.611(s), 2.255(mw), 2.001(m), 1.734(mw)

Type material is deposited in the mineralogical collections of the Herman Ottó Museum, Kossuth u. 13, H-3525 Miskolc, Hungary, catalogue number 2016.351

How to cite: Szakáll, S., Effenberger, H., Fehér, B., Zajzon, N. (2017): Rudabányaite, IMA 2016-088. CNMNC Newsletter No. 35, February 2017, page 150; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-089

Fluorbarytolamprophyllite  
(Ba,Sr)<sub>2</sub>[(Na,Fe<sup>2+</sup>)<sub>3</sub>(Ti,Mg)F<sub>2</sub>][Ti<sub>2</sub>(Si<sub>2</sub>O<sub>7</sub>)<sub>2</sub>O<sub>2</sub>]  
Niva alkaline intrusion, Kola Alkaline Province, Murmansk Region, Russia (67°15'N, 32°17'E)  
Maria I. Filina\*, Sergey M. Aksenov, Nikita V. Chukanov, Natalia V. Sorokhtina, Natalia N. Kononkova, Dmitriy I. Belakovskiy, Sergey N. Britvin, Lia N. Kogarko, Ramiza K. Rastsvetaeva, Ivan G. Bystrov and Alexandr D. Chervonnyi  
\*E-mail: makimm@mail.ru

Lamprophyllite group

Monoclinic: *C2/m*; structure determined  
 $a = 19.538(1)$ ,  $b = 7.092(1)$ ,  $c = 5.391(2)$  Å,  $\beta = 96.704(8)^\circ$   
9.692(40), 3.726(59), 3.414(67), 3.230(96), 3.013(53), 2.780(100), 2.662(52), 2.135(44)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia, registration numbers 4916/1 and 4916/2

How to cite: Filina, M.I., Aksenov, S.M., Chukanov, N.V., Sorokhtina, N.V., Kononkova, N.N., Belakovskiy, D.I., Britvin, S.N., Kogarko, L.N., Rastsvetaeva, R.K., Bystrov, I.G., Chervonnyi, A.D. (2017): Fluorbarytolamprophyllite, IMA 2016-089. CNMNC Newsletter No. 35, February 2017, page 151; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-090

Markeyite  
Ca<sub>9</sub>(UO<sub>2</sub>)<sub>4</sub>(CO<sub>3</sub>)<sub>12</sub>(OH)<sub>2</sub>·28H<sub>2</sub>O  
Markey mine, Red Canyon, White Canyon District, San Juan Co., Utah, USA (37°32'57"N, 110°18'08"W)  
Anthony R. Kampf\*, Jakub Plášil, Anatoly V. Kasatkin, Joe Marty and Jiří Čejka  
\*E-mail: akampf@nhm.org

New structure type

Orthorhombic: *Pmmn*; structure determined  
 $a = 17.969(1)$ ,  $b = 18.4705(6)$ ,  $c = 10.1136(4)$  Å  
10.12(69), 6.41(91), 5.43(100), 5.07(33), 4.618(25), 4.104(37), 3.984(34), 2.732(25)

Cotype material is deposited in the collections of the Natural History Museum, Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue numbers 67091 (holotype), 67092, 67093, 67094 and 69095 (cotype), and the Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia, registration number 4932/1 (cotype)

How to cite: Kampf, A.R., Plášil, J., Kasatkin, A.V., Marty, J., Čejka, J. (2017): Markeyite, IMA 2016-090. CNMNC Newsletter No. 35, February 2017, page 151; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-091

Delhuyarite-(Ce)  
Ce<sub>4</sub>Mg(Fe<sup>3+</sup>,W)<sub>3</sub>□(Si<sub>2</sub>O<sub>7</sub>)<sub>2</sub>O<sub>6</sub>(OH)<sub>2</sub>  
Nya Bastnäs Fe-Cu-REE mine field, Skinnskatteberg, Västmanland, Sweden (59°50'47"N, 15°35'15"E)  
Dan Holtstam\*, Luca Bindi, Ulf Hålenius and Ulf B. Andersson  
\*E-mail: dan.holtstam@vr.se

Chevkinite subgroup

Monoclinic: *C2/m*; structure determined  
 $a = 13.6020(6)$ ,  $b = 5.7445(3)$ ,  $c = 10.9996(5)$  Å,  
 $\beta = 100.721(4)^\circ$   
10.808(99), 4.611(71), 3.211(100), 3.170(66), 3.037(71), 2.726(91), 2.702(83), 2.187(56)

Type material is deposited in the mineralogical collections of the Department of Geosciences, Swedish Museum of Natural History, Box 50007, SE-10405 Stockholm, Sweden, collection number no. NRM 19060375

How to cite: Holtstam, D., Bindi, L., Hålenius, U., Andersson, U.B. (2017): Delhuyarite-(Ce), IMA 2016-091. CNMNC Newsletter No. 35, February 2017, page 151; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-092

Kravtsovite  
PdAg<sub>2</sub>S  
Komsomolsky mine, Talnakh deposit, Noril'sk deposits, Russia (69°30'20"N, 88°27'17"E)  
Anna Vymazalová\*, František Laufek, Sergei F. Sluzhenikin, Chris J. Stanley, Vladimir V. Kozlov, Dmitry A. Chareev and Maria L. Lukashova  
\*E-mail: anna.vymazalova@geology.cz

New structure type

Orthorhombic: *Cmcm*; structure determined  
 $a = 7.9835(1)$ ,  $b = 5.9265(1)$ ,  $c = 5.7451(1)$  Å  
2.632(51), 2.458(65), 2.426(71), 2.378(36), 2.330(60), 2.235(100), 2.197(48), 2.061(42)

Type material is deposited in the mineralogical collections of the Department of Earth Sciences, Natural History Museum, London, UK, catalogue number BM 2016,150

How to cite: Vymazalová, A., Laufek, F., Sluzhenikin, S.F., Stanley, C.J., Kozlov, V.V., Chareev, D.A., Lukashova, M.L. (2017): Kravtsovite, IMA 2016-092. CNMNC Newsletter No. 35, February 2017, page 151; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-093

Argentotetrahedrite  
Ag<sub>6</sub>Cu<sub>4</sub>(Fe,Zn)<sub>2</sub>Sb<sub>4</sub>S<sub>13</sub>  
Keno Hill Ag-Pb-Zn deposit, Yukon Territory, Canada (63°54'29"N, 135°18'14"W)

Mark D. Welch\*, Chris J. Stanley, John Spratt and Stuart J. Mills

\*E-mail: mdw@nhm.ac.uk

The Sb analogue of argentotennantite

Cubic:  $I\bar{4}3m$ ; structure determined

$a = 10.6116(1) \text{ \AA}$

4.331(6), 3.063(100), 2.652(28), 2.501(8), 2.081(19), 1.937(12), 1.876(35), 1.599(25)

Cotype material is deposited in the mineralogical collections of Queen's University (Miller collection), Ontario, Canada, catalogue number M8224 (holotype) and M7138 (cotype), and the Natural History Museum London, specimen number BM2016,101 (cotype)

How to cite: Welch, M.D., Stanley, C.J., Spratt, J., Mills, S.J. (2017): Argentotetrahedrite, IMA 2016-093. CNMNC Newsletter No. 35, February 2017, page 151; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2016-094

Rozhdestvenskayaite

$\text{Ag}_{10}\text{Zn}_2\text{Sb}_4\text{S}_{13}$

Bambolla mine, Moctezuma, Sonora, Mexico (29°41'N, 109°43'W)

Mark D. Welch\*, Chris J. Stanley, John Spratt and Stuart J. Mills

\*E-mail: mdw@nhm.ac.uk

Chemically related to argentotetrahedrite (IMA 2016-093)

Cubic:  $I\bar{4}3m$ ; structure determined

$a = 10.9845(7) \text{ \AA}$

3.161(100), 2.927(8), 2.738(35), 2.581(8), 2.148(18), 1.999(10), 1.936(24), 1.651(19)

Type material is deposited in the mineralogical collections of the Natural History Museum London, specimen number BM2016,102

How to cite: Welch, M.D., Stanley, C.J., Spratt, J., Mills, S.J. (2017): Rozhdestvenskayaite, IMA 2016-094. CNMNC Newsletter No. 35, February 2017, page 152; *European Journal of Mineralogy*, **29**, 149–152.

#### IMA No. 2015-110a

Riesite

$\text{TiO}_2$

Nördlinger Ries Crater, Swabia, Bavaria, Germany (48°48'32"N, 10°35'20"E)

Oliver Tschauner\* and Chi Ma

\*E-mail: olivert@physics.unlv.edu

The fifth polymorph of  $\text{TiO}_2$

Monoclinic:  $P2/c$ ; structure determined

$a = 4.519(3)$ ,  $b = 5.503(8)$ ,  $c = 4.888(2) \text{ \AA}$ ,  $\beta = 90.59(8)^\circ$

3.490(88), 2.852(100), 2.833(70), 2.359(33), 2.094(22), 1.682(23), 1.671(26), 1.647(27)

Type material is deposited in the collections of the Institut für Geowissenschaften, Ruprecht-Karls Universität Heidelberg, Germany, thin section ZLN114c

How to cite: Tschauner, O., Ma, C. (2017): Riesite, IMA 2015-110a. CNMNC Newsletter No. 35, February 2017, page 152; *European Journal of Mineralogy*, **29**, 149–152.

## ADDENDUM

### Potassicmendelevite-(Ce) (not a valid species)

Although erroneously marked as “A” (= Approved) in the IMA List of Minerals for some years, only recently we became aware that actually the mineral has not yet been approved (only the name was approved). Accordingly potassicmendelevite-(Ce) has been omitted from the list of valid species.

## REVISED CHEMICAL FORMULA

A paper on the mineral nickelskutterudite has been published recently [*American Mineralogist*, **102**, 205–209 (2017)] in which the ideal chemical formula of the mineral is given as  $(\text{Ni},\text{Co},\text{Fe})\text{As}_3$ . In this formula, based on new EPMA and SCXRD data, and on crystal-chemical arguments, both Co and Fe must be present as subordinate yet essential components, and no As deficiencies were observed (the previously accepted formula of nickelskutterudite was  $\text{NiAs}_{3-x}$ ). These data were examined carefully by the CNMNC officers and were considered reliable. Accordingly it was agreed to modify the formula of nickelskutterudite in the official IMA List of Minerals. Similarly, the formula of skutterudite becomes now  $\text{CoAs}_3$  (it was  $\text{CoAs}_{3-x}$ ).