

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

## NEWSLETTER 33

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### New minerals and nomenclature modifications approved in 2016

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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 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

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NEW MINERAL PROPOSALS APPROVED IN  
AUGUST 2016Newsletter No. 33, October 2016, page 1136;  
*Mineralogical Magazine*, **80**, 1135–1144.

## IMA No. 2016-035

Incomsartorite  
 $\text{Tl}_6\text{Pb}_{144}\text{As}_{246}\text{S}_{516}$   
 Lengenbach quarry, Imfeld, Binnental, Wallis,  
 Switzerland (46°21'54"N, 8°13'15"E)  
 Dan Topa\*, Berthold Stoeger, Emil Makovicky  
 and Chris Stanley  
 \*E-mail: dan.topa@nhm-wien.ac.at  
 Sartorite homologous series  
 Incommensurate, approximant monoclinic:  
 $P2_1/n$ ; structure determined  
 $a = 45.9944(2)$ ,  $b = 7.8793(1)$ ,  $c = 58.6716(8)$  Å,  
 $\beta = 90.153(1)^\circ$   
 9.78(62), 3.862(70), 3.504(100), 3.458(51),  
 2.950(66), 2.944(77), 2.753(74), 2.750(74)  
 Type material is deposited in the collections of  
 the Naturhistorisches Museum Wien, Austria,  
 catalogue number N 9861  
 How to cite: Topa, D., Stoeger, B., Makovicky, E.  
 and Stanley, C. (2016) Incomsartorite, IMA  
 2016-035. CNMNC Newsletter No. 33, October  
 2016, page 1136; *Mineralogical Magazine*, **80**,  
 1135–1144.

## IMA No. 2016-036

Calamaite  
 $\text{Na}_2\text{TiO}(\text{SO}_4)_2 \cdot 2\text{H}_2\text{O}$   
 Alcaparrosa mine, Cerro Alcaparrosa, Calama  
 commune, El Loa province, Antofagasta  
 region, Chile (22°38'23"S, 69°9'3"W)  
 Igor V. Pekov\*, Oleg I. Siidra, Nikita V. Chukanov,  
 Vasily O. Yapaskurt, Dmitry I. Belakovskiy,  
 Anna G. Turchkova and Gerhard Möhn  
 \*E-mail: igorpekov@mail.ru  
 New structure type  
 Orthorhombic: *Ibam*; structure determined  
 $a = 16.0989(11)$ ,  $b = 16.2399(9)$ ,  $c = 7.0135(4)$  Å  
 8.10(100), 5.04(55), 3.787(26), 3.619(18),  
 3.417(27), 3.185(15), 2.943(20), 2.895(20)  
 Type material is deposited in the collections of  
 the Fersman Mineralogical Museum, Russian  
 Academy of Sciences, Moscow, Russia, regis-  
 tration number 4883/1  
 How to cite: Pekov, I.V., Siidra, O.I., Chukanov,  
 N.V., Yapaskurt, V.O., Belakovskiy, D.I.,  
 Turchkova, A.G. and Möhn, G. (2016)  
 Calamaite, IMA 2016-036. CNMNC

## IMA No. 2016-037

Rowleyite  
 $[\text{Na}(\text{NH}_4, \text{K})_9\text{Cl}_4][\text{V}_2^{5+,4+}(\text{P,As})\text{O}_8]_6 \cdot n[\text{H}_2\text{O}, \text{Na}, \text{NH}_4, \text{K}, \text{Cl}]$   
 Rowley mine (125-foot level), Theba, Painted  
 Rock district, Maricopa Co., Arizona, USA  
 (33°2'57"N, 113°1'49.59"W)  
 Anthony R. Kampf\*, Mark A. Cooper, Barbara  
 P. Nash, Thure E. Cerling, Joe Marty, Daniel  
 R. Hummer, Aaron J. Celestian, Timothy  
 P. Rose and Thomas J. Trebisky  
 \*E-mail: akampf@nhm.org  
 New structure type  
 Cubic:  $Fd\bar{3}m$ ; structure determined  
 $a = 31.704(14)$  Å  
 18.304(49), 11.209(100), 9.559(31), 7.926(63),  
 7.273(34), 4.439(20), 3.186(32), 2.802(74)  
 Cotype material is deposited in the mineralogical  
 collections of the Natural History Museum of  
 Los Angeles County, Los Angeles, California,  
 USA, catalogue numbers 66268, 66269, 66270,  
 66271 and 66272  
 How to cite: Kampf, A.R., Cooper, M.A., Nash,  
 B.P., Cerling, T.E., Marty, J., Hummer, D.R.,  
 Celestian, A.J., Rose, T.P. and Trebisky, T.J.  
 (2016) Rowleyite, IMA 2016-037. CNMNC  
 Newsletter No. 33, October 2016, page 1136;  
*Mineralogical Magazine*, **80**, 1135–1144.

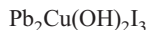
## IMA No. 2016-038

Fleisstalite  
 $\text{Fe}^{2+}(\text{SO}_3) \cdot 3\text{H}_2\text{O}$   
 Mokritzen, Kleines Fleisstal, Carinthia, Austria  
 (47°03'N, 12°54'E)  
 Hans-Peter Bojar\* and Franz Walter  
 \*E-mail: hans-peter.bojar@museum-joanneum.at  
 The  $\text{Fe}^{2+}$  equivalent of gravegliaite  
 Orthorhombic: *Pnma*  
 $a = 9.667(1)$ ,  $b = 5.574(1)$ ,  $c = 9.456(1)$  Å  
 6.76(99), 4.73(56), 4.30(100), 4.25(87), 3.378  
 (70), 2.676(57), 2.641(95), 2.386(67)  
 Type material is deposited in the mineralogical  
 collections of the Universalmuseum Joanneum,  
 Weinzöttlstrasse 16, A-8045 Graz, Austria,  
 catalogue number 85.515  
 How to cite: Bojar, H.-P. and Walter, F. (2016)  
 Fleisstalite, IMA 2016-038. CNMNC Newsletter

No. 33, October 2016, page 1136; *Mineralogical Magazine*, **80**, 1135–1144.

IMA No. **2016-039**

Siidraite



Broken Hill mining area, New South Wales, Australia' (31°57'39"S, 141°27'57"E)

Mike S. Rumsey\*, Mark D. Welch, Annette K. Kleppe and John Spratt

\*E-mail: m.rumsey@nhm.ac.uk

New structure type

Orthorhombic: *Fddd*; structure determined

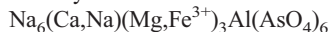
$a = 16.7082(9)$ ,  $b = 20.846(1)$ ,  $c = 21.016(1)$  Å  
6.539(60), 3.312(76), 3.299(54), 3.296(69),  
3.270(81), 2.746(100), 2.738(77), 2.690(64)

Type material is deposited in the mineralogical collections of the Natural History Museum, London, registration numbers BM 84642 (original specimen) and BM 2016,1 (analysed crystal fragments)

How to cite: Rumsey, M.S., Welch, M.D., Kleppe, A.K. and Spratt, J. (2016) Siidraite, IMA 2016-039. CNMNC Newsletter No. 33, October 2016, page 1137; *Mineralogical Magazine*, **80**, 1135–1144.

IMA No. **2016-040**

Anatolyite



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\*, Inna S. Lykova, Vasilii O. Yapaskurt, Dmitry I. Belakovskiy, Anna G. Turchkova, Sergey N. Britvin, Evgeny G. Sidorov and Katharina S. Scheidl

\*E-mail: igorpekov@mail.ru

Isostructural with yurmarinite

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

$a = 13.657(1)$ ,  $c = 18.235(2)$  Å  
7.21(33), 4.539(16), 4.347(27), 3.421(20),  
3.196(31), 2.981(17), 2.827(100), 2.589(18)

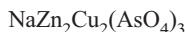
Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia, registration number 4886/1

How to cite: Pekov, I.V., Lykova, I.S., Yapaskurt, V.O., Belakovskiy, D.I.,

Turchkova, A.G., Britvin, S.N., Sidorov, E.G. and Scheidl, K.S. (2016) Anatolyite, IMA 2016-040. CNMNC Newsletter No. 33, October 2016, page 1137; *Mineralogical Magazine*, **80**, 1135–1144.

IMA No. **2016-041**

Zincobradaczekite



Yadovitaya (Poisonous) 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\*, Inna S. Lykova, Natalia N. Koshlyakova, Dmitry I. Belakovskiy, Marina F. Vigasina, Anna G. Turchkova, Sergey N. Britvin, Evgeny G. Sidorov and Katharina S. Scheidl

\*E-mail: igorpekov@mail.ru

Alluaudite group

Monoclinic: *C2/c*; structure determined

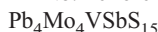
$a = 12.037(1)$ ,  $b = 12.450(1)$ ,  $c = 7.2213(8)$  Å,  
 $\beta = 117.506(7)^\circ$

6.21(31), 3.581(12), 3.416(70), 3.200(17),  
2.779(23), 2.691(100), 1.841(20), 1.680(14)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia, registration number 4881/1

How to cite: Pekov, I.V., Lykova, I.S., Koshlyakova, N.N., Belakovskiy, D.I., Vigasina, M.F., Turchkova, A.G., Britvin, S. N., Sidorov, E.G. and Scheidl, K.S. (2016) Zincobradaczekite, IMA 2016-041. CNMNC Newsletter No. 33, October 2016, page 1137; *Mineralogical Magazine*, **80**, 1135–1144.

IMA No. **2016-042**



Merelani Region, Tanzania

Michael S. Rumsey\*, John A. Jaszczak, Luca Bindi, Stephen A. Hackney, Michael A. Wise, Chris Stanley and John Spratt

\*E-mail: m.rumsey@nhm.ac.uk

Cylindrite homologous series

*Q* pseudo-layer – Triclinic: *C1* or  $C\bar{1}$

$a = 5.929(8)$ ,  $b = 5.961(5)$ ,  $c = 12.03(1)$  Å,  
 $\alpha = 91.33(9)$ ,  $\beta = 90.88(5)$ ,  $\gamma = 91.79(4)^\circ$

6.14(30), 3.96(15), 3.01(10), 2.965(100), 2.444  
(10), 1.852(20), 1.790(15)

*H* pseudo-layer – Triclinic:  $C1$  or  $C\bar{1}$   
 $a = 5.547(9)$ ,  $b = 3.156(4)$ ,  $c = 11.91(1)$ ,  
 $\alpha = 89.52(9)$ ,  $\beta = 92.13(5)$ ,  $\gamma = 90.18(4)^\circ$   
 $5.94(60)$ ,  $4.05(15)$ ,  $2.968(25)$ ,  $2.673(20)$ ,  $2.272$   
 $(40)$ ,  $1.829(30)$ ,  $1.596(15)$

Type material is deposited in the mineralogical collections of the Natural History Museum, London, registration numbers BM2016,100

How to cite: Rumsey, M.S., Jaszczak, J.A., Bindi, L., Hackney, S.A., Wise, M.A., Stanley, C. and Spratt, J. (2016) IMA 2016-042. CNMNC Newsletter No. 33, October 2016, page 1137; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-043

Richardsollyite

TlPbAsS<sub>3</sub>

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

Nicolas Meisser\*, Philippe Roth, Fabrizio Nestola, Cristian Biagioni, Luca Bindi and Martin Robyr

\*E-mail: nicolas.meisser@unil.ch

New structure type

Monoclinic:  $P2_1/c$ ; structure determined

$a = 8.8925(2)$ ,  $b = 8.4154(2)$ ,  $c = 8.5754(2)$  Å,  
 $\beta = 108.665(3)^\circ$

$4.23(80)$ ,  $3.875(70)$ ,  $3.762(100)$ ,  $3.278(70)$ ,  
 $2.931(70)$ ,  $2.714(70)$ ,  $2.663(60)$ ,  $2.622(80)$

Type material is deposited in the mineralogical collections of the Musée Cantonal de Géologie, UNIL-Anthropole, Dorigny, CH-1015 Lausanne, Switzerland, catalogue number MGL n. 080126

How to cite: Meisser, N., Roth, P., Nestola, F., Biagioni, C., Bindi, L. and Robyr, M. (2016) Richardsollyite, IMA 2016-043. CNMNC Newsletter No. 33, October 2016, page 1138; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-044

Bytízite

Cu<sub>3</sub>SbSe<sub>3</sub>

At the mine dump of the shaft No. 16 – Háje, near Příbram, Central Bohemia, Czech Republic (49°40'33.894"N, 14°3'29.922"E)

Pavel Škácha\*, Jiří Sejkora and Jakub Plášil

\*E-mail: skacha-p@muzeum-pribram.cz

Known synthetic analogue

Orthorhombic:  $Pnma$ ; structure determined  
 $a = 7.959(1)$ ,  $b = 10.583(1)$ ,  $c = 6.824(1)$  Å

$3.74(30)$ ,  $3.27(50)$ ,  $3.01(25)$ ,  $2.88(35)$ ,  $2.68$   
 $(100)$ ,  $2.48(20)$ ,  $1.86(30)$ ,  $1.79(25)$

Cotype material is deposited in the mineralogical collections of the National Museum, Department of Mineralogy and Petrology, Cirkusová 1740, Praha 9, Czech Republic, catalogue number PIP 11/2016, and the Mining Museum Příbram, Hynka Kličky Place 293, Příbram VI, 26101 Březové Hory, Czech Republic, catalogue number 2/2016

How to cite: Škácha, P., Sejkora, J. and Plášil, J. (2016) Bytízite, IMA 2016-044. CNMNC Newsletter No. 33, October 2016, page 1138; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-045

Arsenmarcobaldiite

Pb<sub>12</sub>(As<sub>3.2</sub>Sb<sub>2.8</sub>)Σ<sub>6</sub>S<sub>21</sub>

Verzalla, between the Pollone and Monte Arsiccio mines, Apuan Alps, Tuscany, Italy (43°58.045'N, 10°16.678'E)

Cristian Biagioni\*, Stefano Merlino, Yves Moëlo, Marco Pasero, Werner H. Paar, Simone Vezzoni and Federica Zaccarini

\*E-mail: biagioni@dst.unipi.it

Jordanite homologous series

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

$a = 8.9736(9)$ ,  $b = 29.334(3)$ ,  $c = 8.4925(10)$  Å,  
 $\alpha = 98.369(6)$ ,  $\beta = 118.705(6)$ ,  $\gamma = 90.874(6)^\circ$   
 $3.595(m)$ ,  $3.556(m)$ ,  $3.429(m)$ ,  $3.214(ms)$ ,  
 $3.027(ms)$ ,  $2.233(s)$ ,  $2.125(ms)$ ,  $1.839(ms)$

Type material is deposited in the mineralogical collections of the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (Pisa), Italy, catalogue number 19898

How to cite: Biagioni, C., Merlino, S., Moëlo, Y., Pasero, M., Paar, W.H., Vezzoni, S. and Zaccarini, F. (2016) Arsenmarcobaldiite, IMA 2016-045. CNMNC Newsletter No. 33, October 2016, page 1138; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-046

Argentodufrenöysite

Ag<sub>3</sub>Pb<sub>26</sub>As<sub>35</sub>S<sub>80</sub>

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

Dan Topa\*, Emil Makovicky, Chris Stanley and Ralph Cannon

\*E-mail: dan.topa@nhm-wien.ac.at

Sartorite homologous series

Triclinic:  $P\bar{1}$ ; structure determined  
 $a = 7.877(3)$ ,  $b = 8.418(3)$ ,  $c = 49.439(19)$  Å,  
 $\alpha = 89.338(7)$ ,  $\beta = 90.012(7)$ ,  $\gamma = 89.993(6)^\circ$   
 4.16(83), 3.651(82), 3.090(83), 2.954(100),  
 2.722(77), 2.709(63), 2.312(76), 2.104(97)

Type material is deposited in the mineralogical collections of the Naturhistorisches Museum Wien, Austria, catalogue number N 9869

How to cite: Topa, D., Makovicky, E., Stanley, C. and Cannon, R. (2016) Argentodufrenóysite, IMA 2016-046. CNMNC Newsletter No. 33, October 2016, page 1138; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-047

Belousovite

$KZn(SO_4)Cl$

Yadovitaya (Poisonous) fumarole, Second scoria cone of the Northern Breakthrough of the Great Tolbachik Fissure Eruption, Tolbachik volcano, Kamchatka Peninsula, Far-Eastern Region, Russia ( $55^\circ 41'N$ ,  $160^\circ 14'E$ , 1200 m asl) Oleg I. Siidra\*, Evgeny V. Nazarchuk, Anatoly N. Zaitsev, Evgeniya A. Lukina, Roman A. Kayukov, Lidiya P. Vergasova, Stanislav K. Filatov, Gennady A. Karpov and Vladimir V. Shilovskikh

\*E-mail: o.siidra@spbu.ru

New structure type

Monoclinic:  $P2_1/c$ ; structure determined  
 $a = 6.8904(5)$ ,  $b = 9.6115(7)$ ,  $c = 8.2144(6)$  Å,  
 $\beta = 96.582(2)^\circ$   
 6.845(100), 3.640(71), 3.159(84), 3.122(41),  
 3.114(52), 2.981(41), 2.912(44), 2.068(19)

Type material is deposited in the collections of the Mineralogical Museum, Department of Mineralogy, St. Petersburg State University, Russia, specimen number 19651

How to cite: Siidra, O.I., Nazarchuk, E.V., Zaitsev, A.N., Lukina, E.A., Kayukov, R.A., Vergasova, L.P., Filatov, S.K., Karpov, G.A. and Shilovskikh, V.V. (2016) Belousovite, IMA 2016-047. CNMNC Newsletter No. 33, October 2016, page 1139; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-048

Khorixasite

$(Bi_{0.67}\square_{0.33})Cu(VO_4)(OH)$

Mesopotamia mine, Khorixas District, Kunene Region, Namibia

Stuart J. Mills\*, Andrew G. Christy, William D. Birch, Vincent Bourgoin and Jean-Claude Boulliard

\*E-mail: smills@museum.vic.gov.au

The Bi analogue of mottramite

Monoclinic:  $P2/m$ ; structure determined  
 $a = 7.483(1)$ ,  $b = 5.868(1)$ ,  $c = 9.678(2)$  Å,  
 $\beta = 90.14(3)^\circ$   
 5.041(35), 3.499(25), 3.162(48), 2.960(100),  
 2.514(72), 2.141(23), 1.737(32)

Type material is deposited in the mineralogical collections of the Museum Victoria, Melbourne, Australia, registration number M53605

How to cite: Mills, S.J., Christy, A.G., Birch, W. D., Bourgoin, V. and Boulliard, J.-C. (2016) Khorixasite, IMA 2016-048. CNMNC Newsletter No. 33, October 2016, page 1139; *Mineralogical Magazine*, **80**, 1135–1144.

### NEW MINERAL PROPOSALS APPROVED IN SEPTEMBER 2016

#### IMA No. 2016-049

Kuliginite

$Fe_3Mg(OH)_6Cl_2$

Udachnaya (East and West) kimberlite pipe, Yakutia, Russia ( $66^\circ 26'N$ ,  $112^\circ 19'E$ )

Denis S. Mihailenko, Andrey V. Korsakov\*, Sergey V. Rashchenko, Yurii V. Seryotkin, Dmitriy Belakovskiy and Alexander V. Golovin

\*E-mail: korsakov@igm.nsc.ru

New structure type

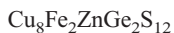
Trigonal:  $R\bar{3}$ ; structure determined  
 $a = 6.9512(1)$ ,  $c = 14.5713(3)$  Å  
 5.569(54), 2.949(16), 2.831(35), 2.324(100),  
 2.098(18), 1.856(13), 1.739(36), 1.539(12)

Type material is deposited in the collections of the Central Siberian Geological Museum, V.S. Sobolev Institute of Geology and Mineralogy, 3 Ac. Koptyuga Avenue, Novosibirsk, 630090 Russia, catalogue number VI-53/1

How to cite: Mihailenko, D.S., Korsakov, A.V., Rashchenko, S.V., Seryotkin, Y.V., Belakovskiy, D. and Golovin, A.V. (2016) Kuliginite, IMA 2016-049. CNMNC Newsletter No. 33, October 2016, page 1139; *Mineralogical Magazine*, **80**, 1135–1144.

IMA No. **2016-050**

Omariniite



Capillitas mining district, Farallon Negro Complex, La Rioja, Argentina

Luca Bindi\*, Hubert Putz, Werner H. Paar and Christopher J. Stanley

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

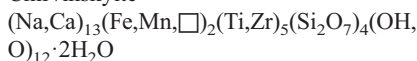
The Ge analogue of stannoidite

Orthorhombic: *I222*; structure determined $a = 10.774(1)$ ,  $b = 5.3921(5)$ ,  $c = 16.085(2)$  Å  
3.106(100), 2.696(6), 1.905(24), 1.901(23),  
1.900(23), 1.625(12), 1.624(12), 1.618(11)

Type material is deposited in the collections of the Systematic Reference Series of the National Mineral Collection of Canada, Geological Survey of Canada, Ottawa, Ontario, Canada, catalogue number NMCC 68096

How to cite: Bindi, L., Putz, H., Paar, W.H. and Stanley, C.J. (2016) Omariniite, IMA 2016-050. CNMNC Newsletter No. 33, October 2016, page 1140; *Mineralogical Magazine*, **80**, 1135–1144.IMA No. **2016-051**

Chirvinskyite



Mt. Takhtarvumchorr, Khibiny alkaline massif, Kola Peninsula, Russia

Victor N. Yakovenchuk, Yakov

A. Pakhomovsky, Taras L. Panikirovskii,

Andrey A. Zolotarev, Julia A. Mikhailova,

Vladimir N. Bocharov, Sergey V. Krivovichev

and Gregory Y. Ivanyuk\*

\*E-mail: ivanyuk@geoksc.apatity.ru

New structure type

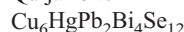
Triclinic: *P* $\bar{1}$ ; structure determined $a = 7.0477(5)$ ,  $b = 9.8725(5)$ ,  $c = 12.2204(9)$  Å,  
 $\alpha = 77.995(5)$ ,  $\beta = 82.057(6)$ ,  $\gamma = 89.988(5)^\circ$   
7.00(34), 5.907(17), 3.956(23), 3.416(33),  
2.886(57), 2.796(100), 1.741(25), 1.646(16)

Type material is deposited in the collections of the Mineralogical Museum, St. Petersburg State University, Russia, catalogue No. 19657, and the Geological and the Mineralogical Museum, Geological Institute, Kola Science Centre, Apatity, Russia, catalogue No. 7609

How to cite: Yakovenchuk, V.N., Pakhomovsky, Y.A., Panikirovskii, T.L., Zolotarev, A.A., Mikhailova, J.A., Bocharov, V.N., Krivovichev,

S.V. and Ivanyuk, G.Y. (2016) Chirvinskyite, IMA 2016-051. CNMNC Newsletter No. 33, October 2016, page 1140; *Mineralogical Magazine*, **80**, 1135–1144.IMA No. **2016-052**

Quijarroite



El Dragón mine, Quijarro province, Potosí, Bolivia (19°49'23.90"S, 65°55'00.60"W, 4160 m asl)

Hans-Jürgen Förster\*, Luca Bindi, Christopher J. Stanley and Günter Grundmann

\*E-mail: forhj@gfz-potsdam.de

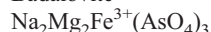
Chemically related to petrovicite

Orthorhombic: *Pmn*2<sub>1</sub>; structure determined $a = 9.2413(8)$ ,  $b = 9.0206(7)$ ,  $c = 9.6219(8)$  Å  
5.36(55), 3.785(60), 3.331(40), 3.291(90),  
3.125(100), 2.312(50), 2.078(35), 1.981(30)

Type material is deposited in the mineralogical collections of the Museo di Storia Naturale, Università di Firenze, Italy, catalogue number 3232/I, and the Natural History Museum, London, catalogue number BM2016,26; cotype material is deposited in the Mineralogical State Collection Munich—Museum Reich der Kristalle, catalogue number MSM 73578

How to cite: Förster, H.-J., Bindi, L., Stanley, C.J. and Grundmann, G. (2016) Quijarroite, IMA 2016-052. CNMNC Newsletter No. 33, October 2016, page 1140; *Mineralogical Magazine*, **80**, 1135–1144.IMA No. **2016-053**

Badalovite



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 N. Koshlyakova, Atali A. Agakhanov, Natalia V. Zubkova, Dmitry I. Belakovskiy, Marina F. Vigasina, Anna G. Turchkova, Evgeny G. Sidorov and Dmitry Y. Pushcharovskiy

\*E-mail: igorpekov@mail.ru

Alluaudite group

Monoclinic: *C2/c*; structure determined $a = 11.9034(3)$ ,  $b = 12.7832(2)$ ,  $c = 6.6634(2)$  Å,  
 $\beta = 112.523(3)^\circ$

6.41(38), 5.505(20), 3.577(23), 3.523(25), 3.211(46), 2.911(28), 2.765(100), 2.618(26)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia, registration number 4882/1

How to cite: Pekov, I.V., Koshlyakova, N.N., Agakhanov, A.A., Zubkova, N.V., Belakovskiy, D.I., Vigasina, M.F., Turchkova, A.G., Sidorov, E.G. and Pushcharovsky, D.Y. (2016) Badalovite, IMA 2016-053. CNMNC Newsletter No. 33, October 2016, page 1140; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-055

Molinelloite

$\text{Cu}(\text{H}_2\text{O})(\text{OH})\text{V}^{4+}\text{O}(\text{V}^{5+}\text{O}_4)$

Molinello mine, Ne, Val Graveglia, Genova district, Liguria, Italy (44°43'N, 9°32'E)

Uwe Kolitsch\*, Christian L. Lengauer, Heinz-Jürgen Bernhardt, Marco E. Ciriotti, Reinhard X. Fischer and Gianluca Armellino

\*E-mail: uwe.kolitsch@nhm-wien.ac.at

Known synthetic analogue

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

$a = 5.122(1)$ ,  $b = 5.296(1)$ ,  $c = 10.356(2)$  Å,  
 $\alpha = 100.01(3)$ ,  $\beta = 101.15(3)$ ,  $\gamma = 101.43(3)^\circ$   
9.90(80), 5.06(20), 4.85(60), 4.019(100), 3.301(35), 3.095(80), 2.781(45), 2.706(25)

Type material is deposited in the mineralogical collections of the Natural History Museum, Vienna, Austria, catalogue no. N 9735

How to cite: Kolitsch, U., Lengauer, C.L., Bernhardt, H.-J., Ciriotti, M.E., Fischer, R.X. and Armellino, G. (2016) Molinelloite, IMA 2016-055. CNMNC Newsletter No. 33, October 2016, page 1141; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-056

Hydroxykenoelsmoreite

$(\square, \text{Pb})_2(\text{W}, \text{Fe}^{3+}, \text{Al})_2(\text{O}, \text{OH})_6(\text{OH})$

Masaka gold mine, Muyinga Province, Burundi (2°45'56"S, 30°16'38"E)

Stuart J. Mills\*, Andrew G. Christy, Anthony R. Kampf, William D. Birch and Anatoly Kasatkin

\*E-mail: smills@museum.vic.gov.au

Pyrochlore supergroup

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

$a = 7.2855(10)$ ,  $c = 17.858(4)$  Å

5.99(51), 3.128(64), 2.983(100), 2.582(32), 1.825(57), 1.558(47), 1.490(14), 1.186(20)

Type material is deposited in the mineralogical collections of the Museum Victoria, Melbourne, Victoria, Australia, registration number M53606  
How to cite: Mills, S.J., Christy, A.G., Kampf, A.R., Birch, W.D. and Kasatkin, A. (2016) Hydroxykenoelsmoreite, IMA 2016-056. CNMNC Newsletter No. 33, October 2016, page 1141; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-057

Magnesiocanutite

$\text{NaMnMg}_2[\text{AsO}_4]_2[\text{AsO}_2(\text{OH})_2]$

Torreillas mine, Salar Grande, Iquique Province, Tarapacá Region, Chile (20°58'13" S, 70°8'17" W)

Anthony R. Kampf\*, Barbara Nash, Maurizio Dini and Arturo A. Molina Donoso

\*E-mail: akampf@nhm.org

Alluaudite group

Monoclinic:  $C2/c$ ; structure determined

$a = 12.2514(8)$ ,  $b = 12.4980(9)$ ,  $c = 6.8345(5)$  Å,  
 $\beta = 113.167(8)^\circ$

6.25(42), 3.566(43), 3.262(96), 3.120(59), 2.787(93), 2.718(100), 2.641(42), 1.503(43)

Type material is deposited in the mineralogical collections of the Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, CA 90007, USA, catalogue numbers 66273 (holotype) and 66274 (cotype)

How to cite: Kampf, A.R., Nash, B., Dini, M. and Molina Donoso, A.A. (2016) Magnesiocanutite, IMA 2016-057. CNMNC Newsletter No. 33, October 2016, page 1141; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-058

Lombardoite

$\text{Ba}_2\text{Mn}^{3+}(\text{AsO}_4)_2(\text{OH})$

Valletta mine, Vallone della Valletta, Canosio, Maira Valley, Cuneo district, Piedmont, Italy (44°23'54"N, 7°5'37"E, 2560 m asl)

Fernando Cámara\*, Ferdinando Bosi, Marco E. Ciriotti, Erica Bittarello, Ulf Hålenius and Corrado Balestra

\*E-mail: fernando.camaraartigas@unito.it

Brackebuschite supergroup

Monoclinic:  $P2_1/m$ ; structure determined

$a = 7.8636(1)$ ,  $b = 6.13421(8)$ ,  $c = 9.1197(1)$  Å,  
 $\beta = 112.660(2)^\circ$

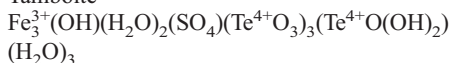
6.985(39), 3.727(33), 3.314(100), 3.073(24), 3.036(33), 3.034(33), 2.813(87), 2.807(87)

Type material is deposited in the mineralogical collections of the Museo Regionale di Scienze Naturali, Sezione di Mineralogia, Petrografia e Geologia, via Giovanni Giolitti 36, I-10123 Torino, Italy, catalogue number M/U 17111

How to cite: Cámara, F., Bosi, F., Ciriotti, M.E., Bittarello, E., Hålenius, U. and Balestra, C. (2016) Lombardoite, IMA 2016-058. CNMNC Newsletter No. 33, October 2016, page 1141; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-059

Tamboite



Wendy open pit, Tambo mine, El Indio-Tambo mining property, Coquimbo Province, Chile (29°46'50"S, 69°56'58"W)

Mark A. Cooper, Frank C. Hawthorne\*, Yassir A. Abdu, Phillip C. Walford and Malcolm E. Back  
\*E-mail: frank\_hawthorne@umanitoba.ca

Closely related to metatamboite (IMA No. 2016-060)

Monoclinic:  $P2_1/c$ ; structure determined  
 $a = 16.979(1)$ ,  $b = 7.310(4)$ ,  $c = 16.666(9)$  Å,  
 $\beta = 108.86(1)^\circ$

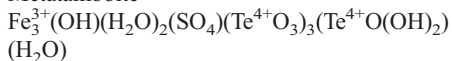
16.07(100), 8.205(4), 4.267(3), 4.153(4), 3.943(4), 3.425(9), 3.171(6), 2.999(8)

Type material is deposited in the mineralogical collections of the Department of Natural History, Royal Ontario Museum, 100 Queens Park, Toronto, Ontario M5S 2C6, Canada, catalogue number M57171

How to cite: Cooper, M.A., Hawthorne, F.C., Abdu, Y.A., Walford, P.C. and Back, M.E. (2016) Tamboite, IMA 2016-059. CNMNC Newsletter No. 33, October 2016, page 1142; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-060

Metatamboite



Wendy open pit, Tambo mine, El Indio-Tambo mining property, Coquimbo Province, Chile (29°46'50"S, 69°56'58"W)

Mark A. Cooper, Frank C. Hawthorne\*, Yassir A. Abdu, Phillip C. Walford and Malcolm E. Back  
\*E-mail: frank\_hawthorne@umanitoba.ca

Closely related to tamboite (IMA No. 2016-059)  
Monoclinic:  $P2_1/c$ ; structure determined

$a = 14.395(5)$ ,  $b = 7.296(4)$ ,  $c = 16.411(6)$  Å,  
 $\beta = 98.91(1)^\circ$

14.22(100), 4.054(9), 4.017(8), 3.423(11), 3.400(11), 3.140(12), 3.012(11), 2.874(13)

Type material is deposited in the mineralogical collections of the Department of Natural History, Royal Ontario Museum, 100 Queens Park, Toronto, Ontario M5S 2C6, Canada, catalogue number M57171

How to cite: Cooper, M.A., Hawthorne, F.C., Abdu, Y.A., Walford, P.C. and Back, M.E. (2016) Metatamboite, IMA 2016-060. CNMNC Newsletter No. 33, October 2016, page 1142; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-061

Roymillerite



Kombat mine, Grootfontein district, Otjozondjupa region, Namibia (19°46'60"S, 18°1'0"E)

Nikita V. Chukanov\*, Erik Jonsson, Sergey M. Aksenov, Sergey N. Britvin, Ramiza K. Rastsvetaeva and Dmitriy I. Belakovskiy  
\*E-mail: nikchukanov@yandex.ru

Structurally related to britvinite and molybdoophyllite

Triclinic:  $P\bar{1}$ ; structure determined  
 $a = 9.315(1)$ ,  $b = 9.316(1)$ ,  $c = 26.463(4)$  Å,

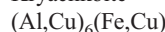
$\alpha = 83.295(3)$ ,  $\beta = 83.308(3)$ ,  $\gamma = 60.023(2)^\circ$   
25.9(100), 13.1(11), 3.480(12), 3.378(14), 3.282(16), 3.185(12), 2.684(16), 2.382(11)

Cotype material is deposited in the mineralogical collections of the Swedish Museum of Natural History, Stockholm, Sweden, catalogue # 20080176

How to cite: Chukanov, N.V., Jonsson, E., Aksenov, S.M., Britvin, S.N., Rastsvetaeva, R. K. and Belakovskiy, D.I. (2016) Roymillerite, IMA 2016-061. CNMNC Newsletter No. 33, October 2016, page 1142; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-062

Kryachkoite



Khatyrka CV3 meteorite, Koryak Mountains, Far Eastern region, Russia (62°39'11"N, 174°30'2"E)



Chi Ma\*, Chaney Lin, Luca Bindi and Paul J. Steinhardt

\*E-mail: [chi@gps.caltech.edu](mailto:chi@gps.caltech.edu)

Known synthetic analogue

Orthorhombic:  $Cmc2_1$

$a = 7.460$ ,  $b = 6.434$ ,  $c = 8.777$  Å

4.872(38), 2.242(61), 2.164(35), 2.130(87), 2.061(46), 2.051(100), 2.007(32), 2.001(62)

Type material is deposited in the mineralogical collections of the the Smithsonian Institution's National Museum of Natural History, Washington DC, USA, registration number USNM 7908

How to cite: Ma, C., Lin, C., Bindi, L. and Steinhardt, P.J. (2016) Kryachkoite, IMA 2016-062. CNMNC Newsletter No. 33, October 2016, page 1142; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2015-007a

Kenoplumbomicrolite

$(Pb, \square)_2Ta_2O_6(\square, (OH), O)$

Ploskaya Mt, Western Keivy Massif, Keivy Mountains, Kola Peninsula, Murmanskaja Oblast, Northern Region, Russia (67°37'60"N, 36°42'0"E)

Luca Bindi, Daniel Atencio\*, Marcelo B. Andrade, Paola Bonazzi, Matteo Zoppi, Chris J. Stanley and Roy Kristiansen

\*E-mail: [datencio@usp.br](mailto:datencio@usp.br)

Pyrochlore supergroup

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

$a = 10.571(1)$  Å

3.050(100), 2.641(42), 2.425(9), 2.033(6), 1.869(26), 1.595(23), 1.527(9)

Type material is deposited in the mineralogical collections of the Museu de Geociências, Instituto de Geociências, Universidade de São Paulo, Rua do Lago 562, 05508–080 São Paulo, Brazil, registration number DR980

How to cite: Bindi, L., Atencio, D., Andrade, M.B., Bonazzi, P., Zoppi, M., Stanley, C.J. and Kristiansen, R. (2016) Kenoplumbomicrolite, IMA 2015-007a. CNMNC Newsletter No. 33, October 2016, page 1143; *Mineralogical Magazine*, **80**, 1135–1144.

#### IMA No. 2016-015

Arsenatotitanite

$NaTi(AsO_4)O$

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, Atali A. Agakhanov, Dmitry I. Belakovskiy, Marina F. Vigasina, Vasily O. Yapaskurt, Evgeny G. Sidorov, Sergey N. Britvin and Dmitry Y. Pushcharovsky

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

Tilasite-durangite group

Monoclinic:  $C2/c$ ; structure determined

$a = 6.6979(3)$ ,  $b = 8.7630(3)$ ,  $c = 7.1976(3)$  Å,  $\beta = 114.805(5)^\circ$

4.845(89), 3.631(36), 3.431(48), 3.300(100), 3.036(100), 2.655(25), 2.627(91), 2.615(57)

Type material is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4852/1

How to cite: Pekov, I.V., Zubkova, N.V., Agakhanov, A.A., Belakovskiy, D.I., Vigasina, M.F., Yapaskurt, V.O., Sidorov, R.G., Britvin, S.N. and Pushcharovsky, D.Y. (2016) Arsenatotitanite, IMA 2016-015. CNMNC Newsletter No. 33, October 2016, page 1143; *Mineralogical Magazine*, **80**, 1135–1144.

## NOMENCLATURE PROPOSAL APPROVED IN AUGUST 2016

### IMA 16-A Gadolinite supergroup

Proposal 16-A on the gadolinite supergroup is accepted. The supergroup is divided in two groups, defined on the basis of the tetrahedral cations:  $Si^{4+}$  in the gadolinite group, and  $P^{5+}$  or  $As^{5+}$  in the herderite group. The gadolinite group is further divided in two subgroups: the gadolinite and datolite subgroups. The herderite group is also divided in two subgroups: the herderite and drugmanite subgroups. Bakerite is discredited.

### Seidozerite supergroup

The seidozerite supergroup has been established. The supergroup is divided into four groups: rinkite group, bafertisite group, lamprophyllite group, murmanite group, and includes 45 mineral species. As it was recognized from the revised end-member formulae that some minerals of the supergroup have species-forming rare-earth elements, the name

rinkite has been changed to rinkite-(Ce), mosandrite to mosandrite-(Ce), and hainite to hainite-(Y).

**Hyalotekite group**

The hyalotekite group has been established. It includes the minerals hyalotekite, khvorovite, kapitsaite-(Y) and itsiite.

**ERRATUM**

IMA No. 2014-061 Erazoite

In CNMNC Newsletter 23, the type locality was given incorrectly. The correct type locality is: Chilena mine, Soledad property, El Guanaco ore deposit, Antofagasta Province, Chile (25° 06'22"S, 69°32'10"W)