



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

NEWSLETTER 37

New minerals and nomenclature modifications approved in 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 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.

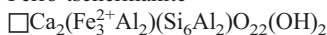
NO OTHER INFORMATION WILL BE RELEASED BY THE COMMISSION

<https://doi.org/10.1180/minmag.2017.081.039>

NEW MINERAL PROPOSALS APPROVED IN
APRIL 2017

IMA No. 2016-116

Ferro-tschermakite



Granite quarries, La Clarté, Perros-Guirec, Ploumanac'h Granitic Complex, Bretagne, France (48°48'50"N, 3°28'50"W)

Roberta Oberti*, Massimo Boiocchi, Frank C. Hawthorne and Marco E. Ciriotti

*E-mail: oberti@crystal.unipv.it

Amphibole supergroup

Monoclinic: space group $C2/m$; structure determined
 $a = 9.7598(6), b = 18.022(1), c = 5.3299(3) \text{ \AA}$
 $\beta = 104.826(1)^\circ$

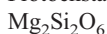
8.359(100), 3.388(27), 3.098(55), 2.708(87), 2.595(41), 2.552(43), 2.330(33), 2.159(27)

Type material is deposited in the collections of the Museo di Mineralogia, Sistema Museale di Ateneo, University of Pavia, catalogue number 2016-02

How to cite: Oberti, R., Boiocchi, M., Hawthorne, F.C. and Ciriotti, M.E. (2017) Ferro-tschermakite, IMA 2016-116. CNMNC Newsletter No. 37, June 2017, page 738; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2016-117

Protoenstatite



Dust Devil Mine, Plush, Lake Co., Oregon, USA Huifang Xu* and Tina R. Hill

*E-mail: hfxu@geology.wisc.edu

A polymorph of enstatite and clinoenstatite

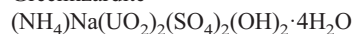
Orthorhombic: space group $Pbcn$
 $a = 9.25(1), b = 8.78(1), c = 5.32(1) \text{ \AA}$
 3.243(20), 3.184(47), 3.180(100), 2.909(38), 2.732(32), 2.556(22), 2.471(24), 2.306(33)

Type material is deposited in the mineralogical collections of the Geology Museum, Department of Geoscience, University of Wisconsin-Madison, 1215 West Dayton Street, Madison, WI 53706, USA, catalogue numbers UWGM 3538 and UWGM 3539

How to cite: Xu, H. and Hill, T.R. (2017) Protoenstatite, IMA 2016-117. CNMNC Newsletter No. 37, June 2017, page 738; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-001

Greenlizardite



Green Lizard Mine, White Canyon mining district, San Juan Co., Utah, USA (37°34'37.10"N, 110°17'52.80"W)

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

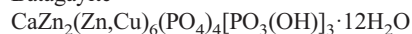
*E-mail: akampf@nhm.org

Structurally related to johannite, deliensite and plášilite

Triclinic: $P\bar{1}$; structure determined
 $a = 6.8362(2), b = 9.5127(3), c = 13.898(1) \text{ \AA}$
 $\alpha = 98.636(7), \beta = 93.713(7), \gamma = 110.102(8)^\circ$
 6.80(100), 6.06(36), 5.75(62), 4.41(32), 3.404(56), 3.126(60), 3.073(26), 2.988(34)
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 66558 (holotype) and 66559 (cotype) How to cite: Kampf, A.R., Plášil, J., Nash, B.P. and Marty, J. (2017) Greenlizardite, IMA 2017-001. CNMNC Newsletter No. 37, June 2017, page 738; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-002

Batagayite



Kester deposit, Arga-Ynnykh-Khai massif, SE Yakutia, Russia

Victor N. Yakovenchuk, Yakov A. Pakhomovsky, Nataliya G. Konoplyova, Taras L. Panikirovskii, Ayya Bazai, Julia A. Mikhailova, Vladimir N. Bocharov, Sergey V. Krivovichev* and Gregory Y. Ivanyuk

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

New structure type

Monoclinic: space group $P2_1$; structure determined
 $a = 8.4264(4), b = 12.8309(6), c = 14.6928(9) \text{ \AA}$
 $\beta = 98.514(6)^\circ$
 14.59(100), 6.34(25), 6.02(11), 4.864(37), 4.766(13), 3.102(20), 2.678(11), 2.411(16)

Type material is deposited in the collections of the Mineralogical museum of the St. Petersburg State University, Russia, No. 19659/1

How to cite: Yakovenchuk, V.N., Pakhomovsky, Y.A., Konoplyova, N.G., Panikirovskii, T.L., Bazai, A., Mikhailova, J.A., Bocharov, V.N., Krivovichev, S.V. and Ivanyuk, G.Y. (2017)

Batagayite, IMA 2017-002. CNMNC Newsletter No. 37, June 2017, page 738; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-003

Aurihydrargyrumite

Au₆Hg₅

Iyoki, Uchiko, Ehime Prefecture, Shikoku, Japan
Daisuke Nishio-Hamane* and Tetsuo Minakawa

*E-mail: hamane@isspu.u-tokyo.ac.jp

Known synthetic analogue

Hexagonal: space group $P6_3/mcm$

$a = 6.996(1)$, $c = 10.154(2)$ Å

2.877(29), 2.434(42), 2.337(100), 2.234(87),
1.401(39), 1.301(41), 1.286(29), 1.225(65)

Type material is deposited in the mineralogical collections of the National Museum of Nature and Science, Tsukuba, Japan, specimen number NSM-45047

How to cite: Nishio-Hamane, D. and Minakawa, T. (2017) Aurihydrargyrumite, IMA 2017-003. CNMNC Newsletter No. 37, June 2017, page 739; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-004

Katerinopoulosite

(NH₄)₂Zn(SO₄)₂·6H₂O

Esperanza mine, Lavrion District, Attiki Prefecture, Greece (37°43'32"N, 24°1'57"E)

Nikita V. Chukanov*, Igor V. Pekov, Dmitry I. Belakovskiy, Sergey N. Britvin, Panagiotis Voudouris, Andreas Magganas and Vasileios Stergiou

*E-mail: nikchukanov@yandex.ru

The Zn analogue of boussingaultite

Monoclinic: space group $P2_1/a$

$a = 9.230(6)$, $b = 12.476(4)$, $c = 6.249(4)$ Å,
 $\beta = 106.79(5)^\circ$

6.00(18), 5.400(37), 4.411(19), 4.314(19),
4.229(24), 4.161(100), 3.749(53), 3.034(29)

Type material is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 5014/1

How to cite: Chukanov, N.V., Pekov, I.V., Belakovskiy, D.I., Britvin, S.N., Voudouris, P., Magganas, A. and Stergiou, V. (2017) Katerinopoulosite, IMA 2017-004. CNMNC Newsletter No. 37, June 2017, page 739; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-005

Hydrokenopyrochlore

$\square_2\text{Nb}_2\text{O}_4(\text{OH})_2(\text{H}_2\text{O})$

Antandrokomby pegmatite, near Mt. Ibity, Sahatany Pegmatite Field, Manandona Valley, Vakinankaratra Region, Antananarivo Province, Madagascar (20°14'25"S, 47°1'19"E)

Cristian Biagioni*, Reto Gieré, Nicolas Meisser, Fabrizio Nestola, Marco Pasero, Martin Robyr, Philippe Roth and Cédric Schnyder

*E-mail: cristian.biagioni@unipi.it

Pyrochlore supergroup

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

$a = 10.4887(8)$ Å

3.677(w), 3.136(s), 3.006(s), 2.598(w), 2.010
(ms), 1.846(s), 1.588(ms), 1.509(m)

Type material is deposited in the mineralogical collections of the Musée cantonal de Géologie, University of Lausanne, Anthropole-Dorigny, CH-1015 Lausanne, Switzerland, catalogue numbers MGL 080141 and 080142, and the Museo di Storia Naturale, Università di Pisa, Via Roma 79, Calci (PI), Italy, catalogue number 19905

How to cite: Biagioni, C., Gieré, R., Meisser, N., Nestola, F., Pasero, M., Robyr, M., Roth, P. and Schnyder, C. (2017) Hydrokenopyrochlore, IMA 2017-005. CNMNC Newsletter No. 37, June 2017, page 739; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-006

Ferrobobfergusonite

$\text{Na}_2\text{Fe}_5^{2+}\text{Fe}^{3+}\text{Al}(\text{PO}_4)_6$

Victory Mine, Custer Co., South Dakota, USA
(43°46'57"N, 103°34'09"W)

Tommy Yong, Hexiong Yang* and Robert T. Downs

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

Wyllieite group

Monoclinic: space group $P2_1/n$; structure determined

$a = 12.7156(3)$, $b = 12.3808(3)$, $c = 10.9347(3)$ Å,
 $\beta = 97.3329(10)^\circ$

6.182(26), 4.180(34), 4.085(35), 3.019(24),
2.845(34), 2.790(38), 2.489(37), 2.070(26)

Type material is deposited in the collections of the Mineral Museum of the University of Arizona, Tucson, USA, catalogue # 21437, and the RRUFF Project, deposition # R140993

How to cite: Yong, T., Yang, H. and Downs, R. T. (2017) Ferrobobfergusonite, IMA 2017-006. CNMNC Newsletter No. 37, June 2017, page 739; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-007

Ferrovorontsovite
 $(\text{Fe}_5\text{Cu})_{\Sigma 6}\text{TlAs}_4\text{S}_{12}$
 Vorontsovskoe gold deposit, 0.5 km W of Vorontsovka, ca. 13 km S of Krasnotur'insk, Sverdlovskaya Oblast', Northern Urals, Russia (59°39'5"N, 60°12'56"E)

Anatoly V. Kasatkin*, Fabrizio Nestola, Atali A. Agakhanov, Radek Škoda, Vladimir Y. Karpenko and Mikhail V. Tsyganko
 *E-mail: anatoly.kasatkin@gmail.com

The Fe analogue of vorontsovite
 Cubic: $\bar{I}43m$; structure determined
 $a = 10.2390(7) \text{ \AA}$
 4.175(93), 3.646(13), 2.952(100), 2.735(57), 2.562(18), 1.869(11), 1.810(40), 1.543(24)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia, registration number 4976/1

How to cite: Kasatkin, A.V., Nestola, F., Agakhanov, A.A., Škoda, R., Karpenko, V.Y. and Tsyganko, M.V. (2017) Ferrovorontsovite, IMA 2017-007. CNMNC Newsletter No. 37, June 2017, page 740; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-008

Garmite
 $\text{CsLiMg}_2(\text{Si}_4\text{O}_{10})\text{F}_2$
 Darai-Pioz glacier, Alai mountain range, Tien-Shan, Rashtskiy (formerly Garmskiy) district, Tajikistan (39°30'N, 70°40'E)

Leonid A. Pautov, Atali A. Agakhanov*, Igor V. Pekov, Vladimir Y. Karpenko, Oleg I. Siidra, Elena Sokolova, Frank C. Hawthorne and Abdulhak R. Faiziev

*E-mail: atali99@mail.ru

The Cs analogue of tainiolite
 Monoclinic: $C2/m$, $C2$ or Cm
 $a = 5.234(2)$, $b = 9.042(4)$, $c = 10.780(4) \text{ \AA}$
 $\beta = 99.73(4)^\circ$
 4.48(35), 3.70(70), 3.45(44), 3.20(31), 2.608(70), 2.580(100), 2.241(45), 2.187(80)

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

Academy of Sciences, Moscow, Russia, registration number 4934/1

How to cite: Kasatkin, A.V., Nestola, F., Agakhanov, A.A., Škoda, R., Karpenko, V.Y. and Tsyganko, M.V. (2017) Garmite, IMA 2017-008. CNMNC Newsletter No. 37, June 2017, page 740; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-010

Levantite
 $\text{KCa}_3\text{Al}_2(\text{SiO}_4)(\text{Si}_2\text{O}_7)(\text{PO}_4)$
 Mont Saint-Hilaire, Québec, Canada
 Evgeny V. Galuskin*, Biljana Krüger, Irina O. Galuskina, Hannes Krüger, Yevgeny Vapnik, Anuschka Pauluhn and Vincent Olieric
 *E-mail: evgeny.galuskin@us.edu.pl

Latiumite group
 Monoclinic: $P2_1$; structure determined
 $a = 12.1006(9)$, $b = 5.1103(4)$, $c = 10.8252(9) \text{ \AA}$
 $\beta = 107.237(8)^\circ$
 3.386(25), 3.277(24), 3.076(100), 2.970(94), 2.889(40), 2.857(83), 2.855(96), 2.555(66)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia, registration # 4898/1

How to cite: Galuskin, E.V., Krüger, B., Galuskina, I.O., Krüger, H., Vapnik, Y., Pauluhn, A. and Olieric, V. (2017) Levantite, IMA 2017-010. CNMNC Newsletter No. 37, June 2017, page 740; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-011

Betpakdalite-FeFe
 $[\text{Fe}_2^{3+}(\text{H}_2\text{O})_{15}(\text{OH})_2\text{Fe}^{3+}(\text{H}_2\text{O})_6][\text{Mo}_8\text{As}_2\text{Fe}_3^{3+}\text{O}_{37}]$

Mt Moliagul, ca. 200 km NW of Melbourne and 58 km W of Bendigo, Victoria, Australia (36°43'24"N, 143°38'56"E)

Stuart J. Mills, Anthony R. Kampf*, Patrick Sutton and William D. Birch
 *E-mail: akampf@nhm.org

Betpakdalite group
 Monoclinic: $C2/m$; structure determined
 $a = 19.51(1)$, $b = 11.131(5)$, $c = 15.37(1) \text{ \AA}$
 $\beta = 130.93(5)^\circ$
 11.689(10), 9.079(100), 7.329(19), 3.679(15), 3.160(15), 3.051(24), 2.791(17), 2.662(12)

Type material is deposited in the mineralogical collections of the Natural History Museum of Los Angeles County, Los Angeles, USA, catalogue

number 66560, and the Museums Victoria, Melbourne, Australia, registration number M53809

How to cite: Mills, S.J., Kampf, A.R., Sutton, P. and Birch, W.D. (2017) Betpakdalite-FeFe, IMA 2017-011. CNMNC Newsletter No. 37, June 2017, page 740; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-012

Schmidite
[Zn₂(Fe³⁺, Mn²⁺)₂Fe³⁺(PO₄)₃(OH)₃(H₂O)₆]·
2H₂O

Cornelia Mine Open Cut, 67 m level, Hagendorf-Süd pegmatite, Hagendorf, Oberpfalz, Bavaria, Germany (49°39'1"N, 12°27'35"E)

Ian E. Grey*, Erich Keck, Anthony R. Kampf, Colin M. MacRae, A. Matthew Glenn, John Cashion and Yesim Gozukara

*E-mail: ian.grey@csiro.au

Related to schoonerite and wilhelmgümbelite
Orthorhombic: *Pmab*; structure determined
 $a = 11.002(1)$, $b = 25.310(2)$, $c = 6.390(1)$ Å
12.73(100), 8.347(39), 5.514(32), 5.424(26),
3.753(32), 3.174(33), 2.761(95), 2.714(26)

Type material is deposited in the mineralogical collections of the Museums Victoria, Melbourne, Australia, registration number M53810 and M53811

How to cite: Grey, I.E., Keck, E., Kampf, A.R., MacRae, C.M., Glenn, A.M., Cashion, J. and Gozukara, Y. (2017) Schmidite, IMA 2017-012. CNMNC Newsletter No. 37, June 2017, page 741; *Mineralogical Magazine*, **81**, 737–742.

NEW MINERAL PROPOSALS APPROVED IN MAY 2017

IMA No. 2017-013

Chlorellestadite
Ca₅(SiO₄)_{1.5}(SO₄)_{1.5}Cl

NW slope of the Shadil Khokh volcano, Kel'sky volcanic Plateau, Greater Caucasus Mountain Range, South Ossetia, Georgia (42°32'32.5"N, 44°17'50.7"E)

Dorota Środek, Maria Książek, Irina O. Galuskina*, Joachim Kusz, Mateusz Dulski, Viktor Gazeev and Evgeny Galuskin

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

Apatite supergroupe

Hexagonal: *P6₃/m*; structure determined
 $a = 9.6002(2)$, $c = 6.8692(2)$ Å

3.435(38), 2.858(100), 2.793(90), 2.771(99),
2.648(21), 2.306(21), 1.967(41), 1.851(23)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Leninskiy pr., 18/k2, 115162 Moscow, Russia, catalogue number 4975/1

How to cite: Środek, D., Książek, M., Galuskina, I.O., Kusz, J., Dulski, M., Gazeev, V. and Galuskin, E. (2017) Chlorellestadite, IMA 2017-013. CNMNC Newsletter No. 37, June 2017, page 741; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-014

Sharyginite

Ca₃TiFe₂O₈

Caspar quarry, Bellerberg volcano, Eastern Eifel region, Rhineland-Palatinate, Germany (50°21'6"N, 7°14'2"E)

Rafał Juroszek, Hannes Krüger, Irina O. Galuskina*, Biljana Krüger, Lidia Ježak, Bernd Ternes, Justyna Wojdyła, Tomasz Krzykawski, Leonid A. Pautov and Evgeny V. Galuskin

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

The Fe analogue of shulamitite
Orthorhombic: *Pmc2₁*; structure determined
 $a = 11.150(8)$, $b = 5.528(2)$, $c = 5.423(2)$ Å
2.763(32), 2.712(27), 2.679(100), 1.936(36),
1.857(19), 1.580(18), 1.559(12), 1.341(11)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Leninskiy pr., 18/k2, 115162 Moscow, Russia, catalogue number 4958/1

How to cite: Juroszek, R., Krüger, H., Galuskina, I.O., Krüger, B., Ježak, L., Ternes, B., Wojdyła, J., Krzykawski, T., Pautov, L.A. and Galuskin, E. V. (2017) Sharyginite, IMA 2017-014. CNMNC Newsletter No. 37, June 2017, page 741; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-016

Piccoliite

NaCaMn₂³⁺(AsO₄)₂O(OH)

In the dumps of the Montaldo di Mondovi mine, Borgata Oberti, Montaldo di Mondovi, Corsaglia Valley, Piedmont, Italy (44°19'08.9"N, 7°51'09.5"E – holotype); in the dumps of the

Valletta mine, Canosio, Maira Valley, Piedmont, Italy (44°23'42"N, 7°5'42"E, 2536 m asl – cotype)

Fernando Cámara*, Cristian Biagioni, Marco E. Ciriotti, Ferdinando Bosi, Uwe Kolitsch, Werner H. Paar, Günther Blass and Erica Bittarello

*E-mail: fernando.camara@unimi.it

Related to pilawite-(Y)

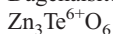
Orthorhombic: *Pbcm*; structure determined $a = 8.8761(9)$, $b = 7.5190(8)$, $c = 11.689(1)$ Å
4.85(m), 3.470(m), 3.167(vs), 2.742(m), 2.683 (ms), 2.580(ms), 2.495(m), 2.325(m)

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 19906 (holotype), and the Museo Civico Archeologico e di Scienze Naturali "F. Eusebio", Alba (CN), Italy, catalogue numbers M00673 (Montaldo di Mondovì) and M00674 (Valletta)

How to cite: Cámara, F., Biagioni, C., Ciriotti, M. E., Bosi, F., Kolitsch, U., Paar, W.H., Blass, G. and Bittarello, E. (2017) Piccoliite, IMA 2017-016. CNMNC Newsletter No. 37, June 2017, page 741; *Mineralogical Magazine*, **81**, 737–742.

IMA No. 2017-017

Dagenaisite



Gold Chain mine, Tintic district, Juab Co., Utah, USA (39°55'44"N, 112°6'50"W)

Anthony R. Kampf*, Robert M. Housley and Joe Marty

*E-mail: akampf@nhm.org

Known synthetic analogue

Monoclinic: *C2/c*

$a = 14.87(2)$, $b = 8.88(2)$, $c = 10.37(2)$ Å, $\beta = 93.33(2)^\circ$

4.311(30), 3.085(22), 3.029(44), 2.744(68), 2.539(100), 2.445(18), 1.657(48), 1.614(17)

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 66561, 66562, 66563 and 66564

How to cite: Kampf, A.R., Housley, R.M. and Marty, J. (2017) Dagenaisite, IMA 2017-017. CNMNC Newsletter No. 37, June 2017, page 742; *Mineralogical Magazine*, **81**, 737–742.

REVISED CHEMICAL FORMULAE

Hellandite-(Ce) and hellandite-(Y)

In the IMA List of Minerals the chemical formulae of hellandite-(Ce) and hellandite-(Y) were inconsistent with those given in the IMA-approved report on hellandites [*Am. Mineral.*, **87** (2002), 745–752].

In both formulae the occupancy at the *T* sites was given as (Be,Li)_{2-x}, however the value of *x* was not specified. Actually it is always $x > 1$, therefore the *T* site is vacant in the ideal formulae of hellandite-(Ce) and hellandite-(Y). Now both formulae have been modified accordingly: (Ca,REE)₄Ce₂Al□₂(B₄Si₄O₂₂)(OH)₂ and (Ca,REE)₄Y₂Al□₂(B₄Si₄O₂₂)(OH)₂, respectively.