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

NEWSLETTER 15

New minerals and nomenclature modifications approved in 2012 and 2013

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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 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

DOI: 10.1180/minmag.2013.077.1.01
New mineral proposals approved in September 2012

IMA No. 2012-039
Ca$_{1.2}$Fe$_2$Si$_2$Al$_5$Be$_2$O$_{13}$·2H$_2$O
In a syenite pegmatite at Langangen, Blåfjell, Norway (59º53’4”N 9º41’38”E) and the A/S Granite Quarry, Tvedalen, Vestfold, Norway.
J. Grice*, R. Kristiansen, H. Friis, R. Rowe, R.S. Selbekk, M. Cooper, A.O. Larsen and G. Poirier
*E-mail: jgrice@mus-nature.ca
Interrupted framework zeolite
Monoclinic: $P2_1/c$; structure determined
$\alpha = 8.759(5)\,\text{Å},\ \beta = 90.31(3)^\circ$
15.555(100), 4.104(29), 3.938(36), 3.909(60), 3.820(30), 3.251(66), 3.186(27), 2.884(64)
Type material is deposited in the collections of the Canadian Museum of Nature, Ottawa, Canada, specimen number CNMMNC 86554, and the Natural History Museum, Oslo, Norway, specimen numbers 43434 and 43435.

IMA No. 2012-040
Markhinite
TiBi(SO$_4$)$_2$
Great Fissure, Tolbachik volcano, Kamchatka Peninsula, Russia.
Stanislav K. Filatov, Lidiya P. Vergasova, Oleg I. Siidra*, Sergey V. Krivovichev and Yuri L. Kretser
*E-mail: siidra@mail.ru
Related to yavapaiite and elfidellite
Triclinic: $P1$; structure determined
$a = 7.375(9),\ b = 10.647(16),\ c = 10.671(12)\,\text{Å},\ \alpha = 61.24(9),\ \beta = 70.77(13),\ \gamma = 70.85(10)^\circ$
4.264(68), 3.442(100), 3.350(35), 3.125(24), 3.054(23), 2.717(45), 2.217(20), 2.114(34)
Type material is deposited in the collections of the Mineralogical Museum, Department of Mineralogy, St Petersburg State University, St Petersburg, Russia, specimen number 1/19526.

IMA No. 2012-045
Haruninite
CaFe$_2$O$_4$
Jabel Harmun Mountain, Judea Desert, West Bank, Palestinian Autonomy, Israel (31º46’N 35º26’E)
Irina O. Galuskina*, Yevgeny Vapnik, Biljana Lazic, Thomas Armbruster, Mikhail Murashko and Evgeny V. Galuskin
*E-mail: irina.galuskina@us.edu.pl
Post-spinel calcium ferrite
Orthorhombic: $Pnma$; structure determined
$a = 9.2183(3),\ b = 3.0175(1),\ c = 10.6934(4)\,\text{Å}$
2.670(52), 2.663(100), 2.524(60), 2.523(35), 2.232(34), 1.833(40), 1.831(27), 1.510(19)
Type material is deposited in the collections of St Petersburg University, Universyetskaya Naberezhnaya 7/9, 190034 St Petersburg, Russia, catalogue number 1/19518.

IMA No. 2012-046
Kyuygenite
Ca$_{12}$Al$_{14}$O$_{32}$·[(H$_2$O)$_4$Cl$_2$]
Xenolith no.1, Upper Chegem volcanic caldera, Kabardino-Balkaria, North Caucasus, Russia (43º17’N 43º6’E)
*E-mail: evgeny.galuskin@us.edu.pl
H$_2$O analogue of brearleyite
Cubic: $I43d$; structure determined
$a = 12.0285(1)\,\text{Å}$
4.911(31), 3.215(15), 3.007(38), 2.690(100), 2.655(46), 2.196(21), 1.668(26), 1.607(30)
Type material is deposited in the collections of the Naturhistorisches Museum, Bern, Switzerland, registration number NMBE 41538.
IMA No. 2012-047
Grigorievite

Cu$_3$Fe$_2^{3+}$Al$_2$(VO$_4$)$_6$

Second scoria cone, Tolbachik volcano, Kamchatka Peninsula, Kamchatka Oblast’, Far-Eastern Region, Russia (55º41'N 160º14'E)

Igor V. Pekov*, Natalia V. Zubkova, Mikhail N. Murashko, Vasily O. Yapaskurt, Yury S. Polekhnovsky, Pavel M. Kartashov and Dmitry Y. Pushcharovskiy
*E-mail: igorpekov@mail.ru

Related to howardevansite

Triclinic: \(P\bar{1}\); structure determined

\(a = 8.0217(5), \ b = 9.6858(10), \ c = 6.5475(9)\) Å,

\(\alpha = 103.645(10), \ \beta = 102.369(8), \ \gamma = 106.281(8)º\)

7.36(27), 4.71(29), 4.41(24), 3.67(26), 3.42(23), 3.14(100), 3.04(92), 2.81(26)

Type material is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4278/1


IMA No. 2012-048

Hatertite

\(Na_2(Ca,Na)(Fe^{3+},Cu)_2(AsO_4)_3\)

North Breach of the Great fissure Tolbachik volcano eruption (1975–1976), Kamchatka Peninsula, Russia (55º41'N 160º14'E)

L.P. Vergasova, S.K. Filatov, D.S. Rybin, S.V. Krivovichev*, S.N. Britvin and V.V. Ananiev
*E-mail: skrivovi@mail.ru

Alluaudite group

Monoclinic: \(C2/c\); structure determined

\(a = 12.640(2), \ b = 13.007(2), \ c = 6.700(1)\) Å,

\(\beta = 113.828(3)º\)

6.49(25), 3.62(25), 3.20(39), 3.05(18), 2.97(28), 2.83(100), 2.63(36), 1.64(19)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Department of Mineralogy, St Petersburg University, St Petersburg, Russia, catalogue number 1/19536

New mineral proposals approved in October 2012

IMA No. 2012-052
Yangite
PhMnSi$_3$O$_8$·H$_2$O
Kombat mine, Otavi Valley, Namibia
William W. Pinch*, Robert T. Downs, Stanley H. Evans, Lauren Megaw and Elias M. Bloch
*E-mail: wwpinch@gmail.com
New chain silicate with the two-connected double chains
Triclinic: $P\overline{1}$; structure determined
$a$ = 7.9833(8), $b$ = 7.2712(7), $c$ = 9.6015(9) Å, $\alpha$ = 109.938(5), $\beta$ = 118.229(4), $\gamma$ = 105.910(4)$^\circ$
7.379(100), 6.648(48), 3.717(43), 3.517(38), 2.992(38), 2.949(40), 2.917(65), 2.907(55)
Type material is preserved in the collections of the Mineral Museum of the University of Arizona, Tucson, Arizona, USA, catalogue number 19341, and the Smithsonian Institution, Washington DC, USA, catalogue number 175983


IMA No. 2012-053
Nickelpicromerite
K$_2$Ni(SO$_4$)$_2$·6H$_2$O
Slyudorudnik, Kyshtym District, Chelyabinsk Oblast, South Urals, Russia (55º40'12"N 60º21'17"E)
Elena V. Belogub, Sergey V. Krivovichev, Igor V. Pekov*, Aleksey M. Kuznetsov, Vasilyi A. Kotlyarov, Nikita V. Chukanov and Dmitriy I. Belakovskiy
*E-mail: igorpekov@mail.ru
Member of a polysomatic series having epidote and törnebohmite as endmembers
Monoclinic: $P2_1/m$; structure determined
$a$ = 8.9277(6), $b$ = 5.6548(3), $c$ = 17.587(1) Å, $\beta$ = 116.475(8)$^\circ$
15.743(92), 4.616(30), 3.499(42), 2.983(100), 2.827(47), 2.751(32), 2.659(23), 2.619(57)
Type material is preserved in the collections of the Museo di Storia Naturale, Università degli Studi di Firenze, Firenze, Italy, catalogue number 3114/I


IMA No. 2012-054
(CaCe$_2.5$Na$_{0.5}$)(Al$_4$)(Si$_2$O$_7$)(SiO$_4$)$_3$O(OH)$_2$
Stetind pegmatite, Tysfjord granite, Norway (68º10'15.20"N 16º33'10.65"E)
Paola Bonazzi*, Luca Bindi, Christian Chopin, Tomas A. Husdal and Giovanni O. Lepore
*E-mail: paola.bonazzi@unifi.it
Member of a polysomatic series having epidote and törnebohmite as endmembers
Monoclinic: $P2_1/c$; structure determined
$a$ = 6.1310(7), $b$ = 12.1863(14), $c$ = 9.0076(10) Å, $\beta$ = 105.045(8)$^\circ$
5.386(34), 4.312(46), 4.240(33), 4.085(100), 3.685(85), 3.041(45), 2.808(31), 2.368(34)
Type material is preserved in the collections of the Natural Scientific Museum of the Ilmen State Reserve, Miass, Russia, specimen number 17301, and the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4281/1


IMA No. 2012-055
Ag$_3$Pb$_{10}$(Sb$_8$As$_{31}$)$_{21}$S$_{40}$
Barika ore deposit, 17 km east of Sardasht, West Azerbaijan Province, Iran (the goldfield is situated between 36º10'N and 36º13'N and 45º37'E and 45º41'E)
Dan Topa*, Emil Makovicky, Hubert Putz, Georg Zagler and Husein Tajjedin
*E-mail: dan.topa@sbg.ac.at
Arsenian N = 4 member of the sartorite homologous series
Monoclinic: $P2_1/n$; structure determined
$a$ = 8.519(3), $b$ = 8.057(3), $c$ = 24.905(8) Å, $\beta$ = 98.926(6)$^\circ$
3.835(62), 3.646(100), 3.441(60), 3.408(62), 3.117(52), 3.008(43), 2.972(66), 2.769(90)
Type material is preserved in the collections of the Department of Materials Engineering and Physics, University of Salzburg, Salzburg, Austria, specimen number 15005


IMA No. 2012-056
Rossiantonite
Al$_3$(PO$_4$)$_2$(OH)$_2$(H$_2$O)$_4$
Akopan-Dal Cin cave system, Chimantha massif, Venezuela (5°10’52”N 6°57’50”W)
Ermanno Galli, Maria Franca Brigatti*, Daniele Malferrari, Francesco Sauro and Jo De Waele
*E-mail: galleri@unimore.it
New structure type
Triclinic: P1; structure determined
a = 10.3415(3), b = 10.9580(3), c = 11.1445(3) Å, 
$\alpha = 86.968(4)$, $\beta = 65.757(3)$, $\gamma = 75.055(3)$°
10.16(32), 9.12(56), 8.02(40), 7.12(33), 5.00(29), 4.647(100), 4.006(53), 3.781(28)
Type material is preserved in the collections of the “Gemma” University Museum of Modena and Reggio E. University, Modena, Italy, catalogue number 2/2012

IMA No. 2012-057
Nabimusaite
KCa$_{12}$(SiO$_4$)$_4$(SO$_4$)$_2$O$_2$F
Jabel Harmun, Nabi Musa, Judea Desert, West Bank, Palestinian Autonomy, Israel (31°46’N 35°26’E)
Evgeny V. Galuskin*, Frank Gfeller, Thomas Armbruster, Irina O. Galuskina, Yevgeny Vapnik, Mikhail Murashko, Roman Włodyka and Piotr Dzierżanowski
*E-mail: evgeny.galuskin@us.edu.pl
Known synthetic nesosilicate
Trigonal: R3$m$; structure determined
a = 7.1905(4), c = 41.251(3) Å
3.595(52), 3.105(97), 2.829(71), 2.753(97), 2.750(89), 2.140(50), 1.986(46), 1.798(100)
Type material is preserved in the collections of the Museum of Natural History in Bern, Bern, Switzerland, catalogue number NMBE 41598


IMA No. 2012-058
Jasrouxite
Ag$_{16}$Pb$_4$(Sb$_{24}$As$_{16}$)S$_{40}$S$_{72}$
Jas Roux mine, La Chapelle en Valgaudemard, Parc National des Ecrins, Hautes-Alpes, France (44°48’45”N 6°19’18”E)
Dan Topa*, Emil Makovicky, Georges Favreau, Vincent Bourgoin, Jean-Claude Boulliard, Georg Zagler and Hubert Putz
*E-mail: dan.topa@sbg.ac.at
Lillianite homologous series
Triclinic: P1; structure determined
a = 8.2917(5), b = 19.101(1), c = 19.487(1) Å, 
$\alpha = 89.731(1)$, $\beta = 83.446(1)$, $\gamma = 89.944(1)$°
Type material is preserved in the collections of the Department of Materials Engineering and Physics, University of Salzburg, Salzburg, Austria, specimen number 15006

IMA No. 2012-059
Cobaltoblodite
Na$_2$Co(SO$_4$)$_2$·4H$_2$O
Blue Lizard mine, Red Canyon, White Canyon District, San Juan County, Utah
Anatoly V. Kasatkin*, Fabrizio Nestola, Jakub Plášil, Joe Marty, Dmitriy I. Belakovskiy, Atali A. Agakhanyan, Stuart J. Mills, Arianna Lanza, Monica Favaro and Sara Bianchin
*E-mail: anatoly.kasatkin@gmail.com
Bloédite group
Monoclinic: P2$_1$/a; structure determined
a = 11.147(1), b = 8.268(1), c = 5.5396(7) Å, 
$\beta = 100.517(11)$°
4.551(80), 4.269(50), 3.795(18), 3.339(43), 3.290(100), 3.258(58), 2.644(21), 2.296(22)
Type material is preserved in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4271/1, and
Museum Victoria, Melbourne, Australia, catalogue number M52196

IMA No. 2012-060
Colinowensite
BaCuSi₂O₆
Central-Eastern orebody, Wessels Mine, Hotazel, Northern Cape Province, South Africa
Branko Rieck*
*E-mail: branko@mineralogie.at
New structure type
Tetragonal: I₄₁/acd; structure determined
a = 9.966(1), c = 22.293(2) Å
5.577(31), 4.997(30), 4.560(31), 3.533(70), 2.985(100), 2.499(57), 2.280(23), 1.767(19)
Type material is preserved in the collections of the Institut für Mineralogie und Kristallographie, University of Vienna, Vienna, Austria, catalogue number HS13.097

IMA No. 2012-061
Bairdite
Pb₂Cu⁴⁺Te⁶⁺O₁₀(OH)₂(SO₄)·H₂O
Bird Nest drift, Otto Mountain, San Bernadino County, California, USA (35.27677ºN 116.09927ºW)
Anthony R. Kampf*, Stuart J. Mills, Robert M. Housley, George R. Rossman, Joseph Marty and Brent Thorne
*E-mail: akampf@nhm.org
New structure type
Monoclinic: P2₁/c; structure determined
a = 14.3126(10), b = 5.2267(3), c = 9.4878(5) Å, β = 106.815(7)°
4.77(50), 4.522(66), 3.480(62), 2.999(97), 2.701(79), 2.614(100), 1.727(65), 1.509(83)
Type material is preserved in the collections of the Natural History Museum of Los Angeles County, Los Angeles, California, USA, catalogue numbers 64000 and 64001

IMA No. 2012-062
Schindlerite
{[Na₂(H₂O)₁₀(H₃O)₄}{V₁₀O₂₈}
St Jude mine, Gypsum Valley, Slick Rock, San Miguel County, Colorado, USA
Anthony R. Kampf, John M. Hughes*, Joe Marty and Barbara Nash
*E-mail: jmhughes@uvm.edu
New structure type
Triclinic: P1; structure determined
a = 8.5143(3), b = 10.4283(5), c = 11.2827(8) Å, α = 68.595(5), β = 87.253(6), γ = 67.112(5)°
10.51(94), 8.68(100), 7.70(86), 6.73(61), 3.815(24), 2.993(50), 2.787(24), 2.131(29)
Type material is preserved in the collections of the Natural History Museum of Los Angeles County, Los Angeles, California, USA, catalogue numbers 64005, 64006 and 64007

IMA No. 2012-063
Wernerbaurite
{[Ca(H₂O)₇]²⁺{(H₂O)₂(H₃O)₂}{V₁₀O₂₈}}
St Jude mine, Gypsum Valley, Slick Rock, San Miguel County, Colorado, USA
Anthony R. Kampf, John M. Hughes*, Joe Marty and Barbara Nash
*E-mail: jmhughes@uvm.edu
New structure type
Triclinic: P1; structure determined
a = 9.7212(6), b = 10.2598(8), c = 10.5928(8) Å, α = 89.999(6), β = 77.083(7), γ = 69.887(8)°
10.32(100), 9.64(92), 8.88(95), 8.10(58), 6.88(70), 6.03(39), 3.02(29), 2.84(29)
Type material is preserved in the collections of the Natural History Museum of Los Angeles County, Los Angeles, California, USA, catalogue numbers 64002, 64003 and 64004
New mineral proposals approved in November 2012

IMA No. 2012-065

Leydetite
Fe(UO₂)(SO₄)₂·11H₂O
Mas d’Alary uranium deposit, Lodève, Hérault, France (43°42'33"N 03°20'12"E)

Jakub Plášil*, Anatoly V. Kasatkin, Radek Škoda, Milan Novák, Anna Kallistová, Karla Fejfarová and Nicolas Meisser
*E-mail: plasil@fzu.cz

New structure type
Monoclinic: \( C2/c \); structure determined
\( a = 11.3173(3) \), \( b = 7.7258(2) \), \( c = 21.8121(7) \) Å, \( \beta = 102.383(3) \°

Type material is preserved in the collections of the Musée Cantonal de Géologie, Lausanne, Switzerland, registration number MGL 92661


IMA No. 2012-066

Linekite
K₂Ca₃[(UO₂)(CO₃)₂]₂·7H₂O
Geschieber vein, Svornost mine, Jáchymov ore district, Western Bohemia, Czech Republic (50°22'21.5"N 12°54'42.0"E)

Jakub Plášil*, Karla Fejfarová, Jiří Sejkora, Jiří Čejka, Milan Novák, Radek Škoda, Jan Houšek, Michal Dušek and Ivana Cisařová
*E-mail: plasil@fzu.cz

Known synthetically
Orthorhombic: \( Pnma \); structure determined
\( a = 4.7001 \), \( b = 11.828 \), \( c = 20.243 \) Å

Type material is preserved in the collections of the Mineralogical Museum of the University of Wrocław, Wrocław, Poland, catalogue number MMWr IV7615; cotype specimens are deposited in the same Museum, catalogue numbers MMWr IV7616, MMWr IV7617, MMWr IV7618 and MMWr IV7619, and in the collections of the Smithsonian Institution, Washington DC, USA, specimen numbers NMNH 175986, NMNH 175987 and NMNH 175988


IMA No. 2012-069

Titanoholtite
\((\text{Ti}_{0.75}\text{Al}_{0.25})\text{Al}_6\text{BSi}_3\text{O}_{18}\)
Szklary serpentinite massif, c. 60 km south of Wrocław, Lower Silesia, Poland (50°39.068’N 16°49.932’E)

Adam Pieczka*, R. James Evans, Edward S. Grew, Lee A. Groat, Chi Ma and George R. Rossman
*E-mail: pieczka@agh.edu.pl

Dumortierite supergroup
Orthorhombic: \( \text{Pnma} \)
\( a = 4.7001 \), \( b = 11.828 \), \( c = 20.243 \) Å

Type material is preserved in the collections of the Mineralogical Museum of the University of Wrocław, Wrocław, Poland, catalogue number MMWr IV7617; cotype specimens are also deposited in the same Museum, catalogue numbers MMWr IV7620 and MMWr IV7621,
and in the collections of the Smithsonian Institution, Washington DC, USA, catalogue numbers NMNH 175986, NMNH 175987 and NMNH 175988


IMA No. 2012-070
Szklaryite
\( \square \text{Al}_4\text{BaS}_3^+\text{O}_{15} \)
Szklary serpentinite massif, c. 60 km south of Wrocław, Lower Silesia, Poland (50º39.068’N 16º49.932’E)
Adam Pieczka*, R. James Evans, Edward S. Grew, Lee A. Groat, Chi Ma and George R. Rossman
*E-mail: pieczka@agh.edu.pl
Dumortierite supergroup
Orthorhombic: \( Pnma \)
a = 4.7001, b = 11.828, c = 20.243 Å
5.914(57), 5.861(100), 3.458(60), 3.444(34), 3.231(95), 3.068(50), 2.931(51), 2.895(59)
The holotype is deposited in the collections of the Mineralogical Museum of University of Wrocław, Wrocław, Poland, catalogue number MMWr IV7615

IMA No. 2012-071
Murashkoite
\( \text{FeP} \)
Halamish wadi, Hatrutim formation, Negev Desert, Israel (31º09’47”N 35º17’57”E)
Sergey N. Britvin*, Yevgeny Vapnik, Yury S. Polekhovsky and Sergey V. Krivovichev
*E-mail: sbritvin@gmail.com
MnP structure type
Orthorhombic: \( Pmma \)
a = 6.3660(5), b = 6.5914(4), c = 8.5568(6) Å
\( \alpha = 93.504(6), \beta = 97.778(7), \gamma = 110.557(6)^\circ \)
6.124(47), 5.874(73), 4.600(88), 3.569(46), 2.939(77), 2.717(88), 2.628(100), 2.204(75)
The holotype is deposited in the collections of the Reale Museo of Napoli, Napoli, Italy, registration number 16986E5525

IMA No. 2012-074
Vanadio-oxy-dravite
\( \text{NaV}_3(\text{Al}_4\text{Mg}_2)(\text{Si}_6\text{O}_{18})(\text{BO}_3)(\text{OH})_3 \)
Pereval quarry, Sludyanka, Irkutsk region, Southern Lake Baikal, Siberia, Russia (51º37’N 103º38’E)
Ferdinando Bosi*, Henrik Skogby, Leonid Reznitskii and Ulf Hälenius
*E-mail: ferdinando.bosi@uniroma1.it
Tourmaline supergroup
Trigonal: \( R_3m \)
a = 16.0273(3), c = 7.2833(1) Å
6.447(37), 4.261(52), 4.004(66), 3.522(47), 2.993(67), 2.596(100), 2.05743(1), 1.934(28)
Type material is deposited in the collections of the Museum of Mineralogy, Earth Sciences Department, Sapienza University of Rome, Rome, Italy, catalogue number 33068
How to cite: Bosi, F., Skogby, H., Reznitskii, L. and Hälenius, U. (2013) Vanadio-oxy-dravite,
IMA No. 2012-075
Aluminopyracmonite
(NH₄)₃Al(SO₄)₃
La Fossa crater, Vulcano, Aeolian Islands, Italy
Francesco Demartin*, Italo Campostrini and Carlo Castellano
*E-mail: francesco.demartin@unimi.it
Related to pyracmonite
Trigonal: \( R \bar{3} \); structure determined
\[ a = 15.0324(8), \quad c = 8.8776(5) \text{ Å} \]
7.469(67), 4.289(45), 4.187(27), 3.336(100),
3.288(60), 2.824(29), 2.796(26), 2.748(21)
Type material is deposited in the Reference Collection of the Dipartimento di Chimica,
University of Milan, Milan, Italy, sample number 2012-01
How to cite: Demartin, F., Campostrini, I. and Castellano, C. (2013) Aluminopyracmonite,

IMA No. 2012-076
Nizamoffite
Mn\(^{2+}\)Zn\(^{2+}\)(PO₄)\(_2\)(H₂O)₄
Palermo No.1 pegmatite, North Groton, Grafton County, New Hampshire, USA
*E-mail: akampf@nhm.org
Mn analogue of hopeite
Orthorhombic: \( Pnma \); structure determined
\[ a = 10.6530(4), \quad b = 18.4778(13), \quad c = 5.0583(2) \text{ Å} \]
9.27(71), 4.62(37), 4.43(24), 3.424(52),
2.873(100), 2.644(36), 2.540(33), 1.953(36)
Type material is deposited in the collections of the Natural History Museum of Los Angeles County,
Los Angeles, California, USA, catalogue numbers 64009 and 64010
How to cite: Kampf, A.R., Falster, A.U., Simmons, W.B. and Whitmore, R.W. (2013) Nizamoffite,

IMA No. 2012-062
Ferdowsiite
Ag₉(Sb₅As₃)S₁₆
Barika gold deposit, Sardasht, West Azerbaijan Province, Iran
Dan Topa*, Emil Makovicky, Hubert Putz, Georg Zagler and Husein Tajjedin
*E-mail: dan.topa@sbg.ac.at
Superstructure of PbS
Monoclinic: \( P2_1/n \); structure determined
\[ a = 8.677(2), \quad b = 5.799(1), \quad c = 13.839(3) \text{ Å}, \quad \beta = 96.175(4)^\circ \]
3.225(96), 3.205(100), 2.900(78), 2.750(90),
2.707(73), 1.998(41), 1.979(39), 1.940(22)
Type material is preserved in the collections of the Department of Materials Engineering and Physics,
University of Salzburg, Salzburg, Austria, specimen number 15006
How to cite: Topa, D., Makovicky, E., Putz, H., Zagler, G. and Tajjedin, H. (2013) Ferdowsiite,

IMA No. 2012-067
Vysokýite
U⁴⁺[AsO₂(OH)₂]₄·4H₂O
Svornost mine, Jáchymov ore district, Czech Republic (50°22'21.47''N 12°54'42.00''E)
Jakub Plášil*, Karla Fejfarová, Jan Hloušek, Radek Škoda, Milan Novák, Jiří Sejkora, Jiří Čejka, František Veselovský and Juraj Majzlan
*E-mail: plasil@fzu.cz
New structure type
Triclinic: \( P_1 \); structure determined
\[ a = 10.749(2), \quad b = 5.044(3), \quad c = 19.178(7) \text{ Å}, \quad \alpha = 89.872(15)\), \( \beta = 121.534(15)\), \( \gamma = 76.508(15)^\circ \]
8.782(100), 8.067(50), 6.399(7), 4.773(6),
3.411(10), 3.197(18), 3.189(11), 3.076(11)
Type material is preserved in the collections of the Department of Mineralogy and Petrology of the National Museum in Prague, Prague, Czech Republic, catalogue number PIP 1/2012
IMA No. 2012-073
Alburnite
Ag₈GeTe₂S₄
Cărișiel vein, Roșia Montana deposit, Apuseni Mountains, Romania
Călin G. Tamaș*, Bernard Grobety, Laurent Bailly, Heinz-Juergen Bernhardt and Adrian Minuț
*E-mail: calingtamas@yahoo.fr
Argyrodite–canfieldite series
Cubic: F43m
a = 10.4±0.1 Å
6.004(67), 3.136(48), 3.002(100), 2.600(26), 2.123(33), 2.002(61), 1.838(76), 1.644(12)
Type material is deposited in the collections of the Mineralogical Museum, Department of Geology, Faculty of Biology and Geology, Babeș-Bolyai University, Cluj-Napoca, Romania, registration numbers 71a/1 and 71a/2, and at Zentrale Elektronen-Mikrosonde, Institute of Geology, Mineralogy and Geophysics, Ruhr University, Bochum, Germany, section 1064b

IMA No. 2012-077
Parádsasvárités
Zn₂(CO₃)(OH)₂·2H₂O
Nagy-Lápafo, Parádsasvár, Mátra Mountains, Hungary (47°54'26.50"N 19°57'9.68"E)
Béla Feher*, Sándor Szakáll, Norbert zajzon and Judith Mihály
*E-mail: feherbela@upcmail.hu
Malachite–rosasite group
Monoclinic: P2₁/a
a = 12.92(1), b = 9.372(7), c = 3.159(4) Å, β = 110.4(1)°
6.054(67), 5.085(100), 3.703(87), 3.021(25), 2.971(25), 2.603(62), 2.539(36), 2.498(23)
Type material is deposited in the collections of the Herman Ottó Museum, Miskolc, Hungary, catalogue number 2012.23

IMA No. 2012-078
Kudryavtsevaite
Na₃(Mg,Fe)(Fe,Ti)₂Ti₃O₁₂
AK-8 pipe, Orapa kimberlite complex, Botswana (21°18′S 25°24′E)
Sergey Anashkin, Anjelica Bovkun, Luca Bindi*, Viktor Garanin and Yuriy Litvin
*E-mail: luca.bindi@unifi.it
New structure type
Orthorhombic: Pnma; structure determined
a = 27.714(1), b = 2.9881(3), c = 11.3564(6) Å
7.17(100), 4.84(70), 2.973(35), 2.841(50), 2.706(50), 2.541(50), 2.450(70), 2.296(45)
Type material is deposited in the collections of the Museo di Storia Naturale, Università degli Studi di Firenze, Firenze, Italy, catalogue number 3115/I

IMA No. 2012-079
Majindeite
Mg₂Mo₃O₈
Allende meteorite
Chi Ma
*E-mail: chi@gps.caltech.edu
Mg analogue of kamiokite
Hexagonal: P6₃mc
a = 5.778, c = 9.904 Å
4.952(100), 3.520(57), 2.495(35), 2.426(67), 2.233(23), 1.994(50), 1.641(24), 1.553(38)
Type material is deposited in the collections of the Smithsonian Institution’s National Museum of Natural History, Washington DC, USA, registration number USNM 7615

IMA No. 2012-080
Fabriesite
Na₃Al₃Si₃O₁₂·2H₂O
Tawmaw, Hpakan-Tawmaw Jade Tract, Hpakant Township, Mohnin District, Kachin State, Myanmar
C. Ferraris*, S. Pont, G.C. Parodi, B. Rondeau and J.P. Lorand
*E-mail: ferraris@mnhn.fr
Known synthetic compound
Orthorhombic: $Pna2_1$
$a = 16.4260(1), b = 15.0140(1), c = 5.2235(5)$ Å
8.21(36), 7.51(32), 4.41(77), 3.41(100),
2.97(70), 2.86(25), 2.61(40), 2.45(29)
Type material is deposited in the collections of the Muséum National d’Histoire Naturelle (MNHN) of Paris, France, registration number MNHN 212-001

IMA No. 2012-081
Kihlmanite-(Ce)
$\text{Ce}_2\text{TiO}_2(\text{SiO}_4)(\text{HCO}_3)(\text{H}_2\text{O})$
Mount Kihlman, Khibiny Mountains, Kola Peninsula, Russia
Victor N. Yakovenchuk*, Gregory Y. Ivanyuk, Sergey V. Krivovichev, Elena A. Zhitova, Yakov A. Pakhomovskiy, Ekaterina A. Selivanova, Julia A. Korchak and Galijabanu I. Kadyrova
*E-mail: yakovenchuk@ksc.ru
Closely related to tundrite-(Ce)
Triclinic: $P\bar{1}$; structure determined
$a = 5.009(5), b = 7.533(5), c = 15.407(5)$ Å, $\alpha = 103.061(5), \beta = 91.006(5), \gamma = 109.285(5)$º
15.11(100), 7.508(20), 6.912(12), 4.993(14), 3.563(15), 3.198(11), 3.065(12), 2.896(15)
Type material is deposited in the collections of the Mineralogical Museum of St Petersburg State University, St Petersburg, Russia, registration number 1/19598, and the Geological and the Mineralogical Museum of the Geological Institute of the Kola Science Centre, Apatity, Russia, registration number GIM 6790

IMA No. 2012-082
Erzwiesite
$\text{Ag}_8\text{Pb}_{12}\text{Bi}_{16}\text{S}_{40}$
Unnamed prospect in the Erzwies mining district, Gastein Valley, Salzburg Province, Austria (47°5’40”N 13°2’15”E)
Dan Topa*, Emil Makovicky, Hubert Putz and Werner H. Paar
*E-mail: dan.topa@sbg.ac.at
Lillianite homologous series
Orthorhombic: $Cmcm$; structure determined
$a = 4.085(5), b = 13.462(15), c = 33.92(4)$ Å
3.588(64), 3.387(98), 3.349(38), 3.288(86), 2.919(100), 2.846(99), 2.043(39), 2.039(44)
Type material is deposited in the collections of the Department of Materials Engineering and Physics, University of Salzburg, Salzburg, Austria, specimen number 15009

IMA No. 2012-083
Lopatkaite
$\text{Pb}_5\text{Sb}_3\text{AsS}_{11}$
Madoc, Ontario, Canada
Dan Topa*, Emil Makovicky, Hubert Putz and Georg Zagler
*E-mail: dan.topa@sbg.ac.at
Homeotype of boulangerite
Monoclinic: $P2_1/c$; structure determined
$a = 8.0806(6), b = 23.360(2), c = 21.488(2)$ Å, $\beta = 100.709(1)$º
3.728(42), 3.722(38), 3.712(100), 3.296(36), 3.207(36), 2.804(42), 2.780(46), 2.779(40)
Type material is deposited in the collections of the Department of Materials Engineering and Physics, University of Salzburg, Salzburg, Austria, specimen number 15008

IMA No. 2012-021a
Vanadium
$\text{V}$
Colima volcano, Colima and Jalisco States, Mexico (19°30’45”N, 103°37’W)
Mikhail Ostrooumov
*E-mail: ostroum@umich.mx
Iron group
Cubic: $\text{Im}3\text{m}$
$a = 3.022(3)$ Å
2.142(100), 1.513(14), 1.230(28), 1.069(8), 0.957(14), 0.871(4), 0.809(10)
Type material has been deposited in the collections of the Geological Museum,
Nomenclature proposal approved in November 2012

IMA 12-C: Dumortierite supergroup

A report on the nomenclature of the minerals of the dumortierite supergroup has been approved, and the endmember compositions have been defined. The supergroup presently includes six valid species, divided into two groups (and a potential third group).

IMA 12-F: A new root-name for the amphibole composition \( [(\text{NaMn}^{2+})(\text{Mg_4Al})\text{Si_8O_{22}}(\text{OH})_2] \)

The above composition, mentioned as “root-name11” in the newly-approved amphibole report, has been assigned the name “ghoseite”, in honour of Subrata Ghose (b. 1932), Emeritus Professor at the University of Washington, Seattle, USA. Accordingly, the new mineral IMA 2003-066, whose endmember composition is \( [(\text{NaMn}^{2+})(\text{Mg}_4\text{Fe}^{3+})\text{Si_8O_{22}}(\text{OH})_2] \), is named ferri-ghoseite.