Mineralogical Magazine, December 2011, Vol. 75(6), pp. 2887–2893

CNMNC Newsletter

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

NEWSLETTER 11

New minerals and nomenclature modifications approved in 2011

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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.2011.075.6.2887

NEW MINERAL PROPOSALS APPROVED IN SEPTEMBER 2011

IMA No. **2011-054**

Protochabournéite

$Tl_{5-x}Pb_{2x}(Sb,As)_{21-x}S_{34}$ ($x \sim 1.2-1.5$)

Sant'Olga tunnel, Monte Arsiccio mine, Stazzema, Apuan Alps, Tuscany, Italy (43º58′N 10º17′E)

Paolo Orlandi*, Cristian Biagioni, Elena Bonaccorsi, Yves Moëlo and Werner H. Paar

*E-mail: orlandi@dst.unipi.it

Homeotype of chabournéite

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

a = 8.150(2), b = 8.716(2), c = 21.579(4) Å, α = 85.18(1), β = 96.94(1), γ = 88.60(1)º

4.23(51), 3.959(54), 3.928(60), 3.673(63), 3.608(100), 2.824(77), 2.790(61)

Type material is deposited in the collections of the Museo di Storia Naturale e del Territorio, Università di Pisa, Italy, catalogue number 19413

How to cite: Orlandi, P., Biagioni, C., Bonaccorsi, E., Moëlo, Y. and Paar, W.H. (2011) Protochabournéite, IMA 2011-054. CNMNC Newsletter No. 11, December 2011, page 2888; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-055**

$(CaCe_3)(Al_3Fe^{2+})(Si_2O_7)(SiO_4)_3O(OH)_2$

In the Hundholmen pegmatite, and the Stetind and Nedre Eivollen pegmatite outcrops of the Tysfjord granite, northern Norway

Paola Bonazzi*, Luca Bindi, Christian Chopin, Tomas A. Husdal and Giovanni O. Lepore

*E-mail: paola.bonazzi@unifi.it

Part of a polysomatic series having epidote and törnebohmite as endmembers

Monoclinic: $P2_1/m$; structure determined

a = 8.9110(4), b = 5.6866(2), c = 17.5252(7) Å, β = 116.300(5)º

15.7(75), 4.62(30), 3.489(40), 2.971(100), 2.828(50), 2.739(30), 2.619(60), 2.140(25)

Type material is deposited in the collections of the Museo di Storia Naturale, Università degli Studi di Firenze, Firenze, Italy, catalogue number 3110/I

How to cite: Bonazzi, P., Bindi, L., Chopin, C., Husdal, T.A. and Lepore, G.O. (2011) IMA 2011-055. CNMNC Newsletter No. 11, December 2011, page 2888; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-056**

Aspedamite

$\square_{12}(Fe_2^{3+}Fe^{2+})Nb_4(ThNb_9Fe_2^{3+}Ti^{4+}O_{42})(H_2O)_9(OH)_3$

Herrebøkasa quarry, Aspedammen, Østfold, Norway (59º04′30″N 11º28′35″E)

Mark A. Cooper, N.A. Ball, Yassir Abdu, F.C. Hawthorne*, P. Černý and R. Kristiansen

*E-mail: frank_hawthorne@umanitoba.ca

Isostructural with menezesite

Cubic: $Im\bar{3}$; structure determined

a = 12.9078(6) Å

9.107(100), 4.567(15), 4.083(15), 3.454(18), 3.233(28), 2.889(33), 2.635(36), 1.726(29)

Type material is deposited in the collections of the Department of Natural History, Royal Ontario Museum, Toronto, Ontario, Canada, catalogue number M56117

How to cite: Cooper, M.A., Ball, N.A., Abdu, Y., Hawthorne, F.C., Černý, P. and Kristiansen, R. (2011) Aspedamite, IMA 2011-056. CNMNC Newsletter No. 11, December 2011, page 2888; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-057**

Mariinskite

$BeCr_2O_4$

Mariinskoye emerald deposit, Malysheva, Sverdlovskaya Oblast', Russia (57.11842ºN 61.40097ºE)

Leonid A. Pautov*, Michail P. Popov, Yuriy V. Erokhin, Vera V. Khiller and Vladimir Y. Karpenko

*E-mail: labfmm@rambler.ru

Chromium-dominant analogue of chrysoberyl

Orthorhombic: *Pnma*

a = 9.709(2), b = 5.612(1), c = 4.492(1) Å

4.85(3), 4.08(4), 3.31(9), 2.629(5), 2.434(5), 2.381(4), 2.139(6), 1.651(10)

Type material is deposited in the collections of the Fersman Mineralogical Museum, Russian Academy of Science, Leninsky Prospect, Moscow, Russia, registration number 4159/1

How to cite: Pautov, L.A., Popov, M.P., Erokhin, Y.V., Khiller, V.V. and Karpenko, V.Y. (2011) Mariinskite, IMA 2011-057. CNMNC Newsletter No. 11, December 2011, page 2888; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-058**

Edgrewite

$Ca_9(SiO_4)_4F_2$

Upper Chegem volcanic caldera, Kabardino-Balkaria, North Caucasus, Russia (43°17′N 43°6′E)
E.V. Galuskin*, T. Armbruster, N.N. Pertsev, I.O. Galuskina, B. Lazic, V.M. Gazeev, R. Włodyka, M. Dulski, P. Dzierżanowski, A.E. Zadov and L. Dubrovinsky
*E-mail: evgeny.galuskin@us.edu.pl
Humite group
Monoclinic: $P2_1/b$; structure determined
a = 5.0687(1), b = 11.3579(1), c = 15.4004(2) Å, α = 100.598(1)°
3.542(51), 3.029(100), 2.863(42), 2.823(79), 2.765(64), 2.657(44), 2.625(55), 1.907(59)
Type material is deposited in the collections of the Museum of Natural History, Bern, Switzerland, catalogue number NMBE 41086
How to cite: Galuskin, E.V., Armbruster, T., Pertsev, N.N., Galuskina, I.O., Lazic, B., Gazeev, V.M., Włodyka, R., Dulski, M., Dzierżanowski, P., Zadov, A.E. and Dubrovinsky, L. (2011) Edgrewite, IMA 2011-058. CNMNC Newsletter No. 11, December 2011, page 2888; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-060**
Postite
$Mg(H_2O)_6Al_2(OH)_2(H_2O)_8(V_{10}O_{28})\cdot 13H_2O$
Vanadium Queen mine, La Sal Creek Canyon, and the Blue Cap mine, Lyon Canyon Creek, San Juan County, Utah, USA
Anthony R. Kampf, John M. Hughes*, Joe Marty and Barbara Nash
*E-mail: jmhughes@uvm.edu
New structure type
Orthorhombic: *Pccn*; structure determined
a = 16.3357(6), b = 24.2434(17), c = 11.7343(4) Å
12.19(90), 8.937(100), 8.248(22), 6.801(14), 3.771(24), 3.335(13), 2.983(19), 1.991(17)
Two cotype specimens are deposited in the collections of the Natural History Museum of Los Angeles County, Los Angeles, California, USA, catalogue numbers 63564 (Vanadium Queen mine) and 63563 (Blue Cap mine)
How to cite: Kampf, A.R., Hughes, J.M., Marty, J. and Nash, B. (2011) Postite, IMA 2011-060. CNMNC Newsletter No. 11, December 2011, page 2889; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-061**
Falsterite
$Ca_2MgMn_2^{2+}(Fe_{0.5}^{2+}Fe_{0.5}^{3+})_4Zn_4(PO_4)_8(OH)_4(H_2O)_{14}$
Palermo No. 1 pegmatite, North Groton, Grafton County, New Hampshire, USA
Anthony R. Kampf*, Stuart J. Mills, William B. Simmons and James W. Nizamoff
*E-mail: akampf@nhm.org
New structure type
Monoclinic: $P2_1/c$; structure determined
a = 6.3868(18), b = 21.260(7), c = 15.365(5) Å, β = 90.564(6)°
12.865(34), 10.675(100), 4.834(12), 4.043(18), 3.220(25), 3.107(14), 2.846(19), 1.596(14)
Four cotype specimens are deposited in the collections of the Natural History Museum of Los Angeles County, Los Angeles, California, USA, catalogue numbers 63565, 63566, 63567 and 63568
How to cite: Kampf, A.R., Mills, S.J., Simmons, W.B. and Nizamoff, J.W. (2011) Falsterite, IMA 2011-061. CNMNC Newsletter No. 11, December 2011, page 2889; *Mineralogical Magazine*, **75**, 2887–2893.

NEW MINERAL PROPOSALS APPROVED IN OCTOBER 2011

IMA No. **2011-059**
Leonardsenite
$MgAlF_5\cdot 2H_2O$
Eldfell and Hekla volcanoes, Iceland
Donatella Mitolo, Anna Garavelli, Tonči Balić-Žunić*, Pasquale Acquafredda and Sveinn Peter Jakobsson
*E-mail: toncib@snm.ku.dk
Inverse weberite structure
Orthorhombic: *Imma*
a = 7.055(1), b = 10.117(2), c = 6.813(1) Å
5.66(100), 4.92(29), 3.53(27), 3.03(31), 3.00(38), 2.297(16), 1.766(19), 1.762(24)
Holotype material (Eldfell) is deposited in the collections of the Icelandic Institute of Natural History, Reykjavík, Iceland, sample number NI 12256; other deposited material has the numbers 20630 (Eldfell), and NI 17067, NI 17073 and NI 17074 (Hekla)
How to cite: Mitolo, D., Garavelli, A., Balić-Žunić, T., Acquafredda, P. and Jakobsson, S.P. (2011) Leonardsenite, IMA 2011-059. CNMNC Newsletter No. 11, December 2011, page 2889; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-062**
Bastnäsite-(Nd)
$NdCO_3F$
Stetind pegmatite, Tysfjord, Nordland, Norway (68°10′15.20″N 16°33′10.65′E)
Ritsuro Miyawaki*, Kazumi Yokoyama and Tomas Husdal
*E-mail: miyawaki@kahaku.go.jp
Bastnäsite group
Hexagonal: $P\bar{6}2c$
a = 7.079(1), c = 9.721(2) Å
4.86(71), 3.54(70), 2.86(100), 2.43(22), 2.04(31), 2.00(48), 1.883(29), 1.662(16)
Type material is deposited in the collections of the National Science Museum, Tokyo, registration number NSM-MF15494
How to cite: Miyawaki, R., Yokoyama, K. and Husdal, T. (2011) Bastnäsite-(Nd), IMA 2011-062. CNMNC Newsletter No. 11, December 2011, page 2890; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-064**
D'ansite-(Mn)
$Na_{21}Mn^{2+}(SO_4)_{10}Cl_3$
Somma-Vesuvius complex, Napoli, Italy
Italo Campostrini*, Francesco Demartin, Carlo Castellano, Carlo Maria Gramaccioli and Massimo Russo
*E-mail: italo.campostrini@unimi.it
Mn^{2+}-dominant analogue of d'ansite
Cubic: $I\bar{4}3d$; structure determined
a = 15.9291(9) Å
6.503(100), 5.632(27), 5.037(73), 4.257(80), 3.252(46), 3.124(64), 2.584(27), 2.458(22)
Holotype material is deposited in the mineral collections of Osservatorio Vesuviano - Napoli (Catalogue number OV128); a fragment of the holotype is housed in in the Reference Collection of the DCSSI, University of Milan, sample number 2011-03
How to cite: Campostrini, I., Demartin, F., Castellano, C., Gramaccioli, C.M. and Russo, M. (2011) D'ansite-(Mn), IMA 2011-064. CNMNC Newsletter No. 11, December 2011, page 2890; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-065**
D'ansite-(Fe)
$Na_{21}Fe^{2+}(SO_4)_{10}Cl_3$
La Fossa crater, Vulcano, Aeolian Islands, Italy
Italo Campostrini*, Francesco Demartin, Carlo Castellano and Carlo Maria Gramaccioli
*E-mail: italo.campostrini@unimi.it
Fe^{2+}-dominant analogue of d'ansite
Cubic: $I\bar{4}3d$; structure determined
a = 15.882(3) Å
3.384(27), 3.113(26), 2.900(14), 2.807(100), 2.570(37), 2.161(15), 2.018(15), 1.714(29)
Holotype material is deposited in the Reference Collection of the DCSSI, University of Milan, sample number 2011-02
How to cite: Campostrini, I., Demartin, F., Castellano, C. and Gramaccioli, C.M. (2011) D'ansite-(Fe), IMA 2011-065. CNMNC Newsletter No. 11, December 2011, page 2890; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-066**
Kobyashevite
$Cu_5(SO_4)_2(OH)_6{\cdot}4H_2O$
Kapital'naya mine, Vishnevye Mountains, Chelyabinsk Oblast', South Urals, Russia
Igor V. Pekov*, Natalia V. Zubkova, Vasiliy O. Yapaskurt, Dmitriy I. Belakovskiy, Nikita V. Chukanov, Anatoly V. Kasatkin, Aleksey M. Kuznetsov and Dmitry Y. Pushcharovsky
*E-mail: igorpekov@mail.ru
Known synthetic phase
Triclinic: $P\bar{1}$; structure determined
a = 6.0731(6), b = 11.0597(13), c = 5.5094(6) Å, α = 102.883(9), β = 92.348(8), γ = 92.597(9)°
10.84(100), 5.399(40), 5.178(12), 3.590(16), 2.691(16), 2.653(12), 2.583(12), 2.425(12)
The type specimen is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4152/1
How to cite: Pekov, I.V., Zubkova, N.V., Yapaskurt, V.O., Belakovskiy, D.I., Chukanov, N.V., Kasatkin, A.V., Kuznetsov, A.M. and Pushcharovsky, D.Y. (2011) Kobyashevite, IMA 2011-066. CNMNC Newsletter No. 11, December 2011, page 2890; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-067**
Calciolangbeinite
$K_2Ca_2(SO_4)_3$
Yadovitaya (Poisonous) fumarole, Second scoria cone, Tolbachik volcano, Kamchatka peninsula, Kamchatka Oblast', Far-Eastern Region, Russia (55°41′N 160°14′E)
Igor V. Pekov*, Michael E. Zelenski, Natalia V. Zubkova, Vasiliy O. Yapaskurt, Nikita V.

Chukanov, Dmitriy I. Belakovskiy and Dmitry Y. Pushcharovsky
*E-mail: igorpekov@mail.ru
Langbeinite group
Cubic: $P2_13$; structure determined
a = 10.1887(2) Å
5.84(8), 4.54(9), 4.15(27), 3.218(100), 2.838(8), 2.736(37), 2.006(11), 1.658(8)
The type specimen is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4153/1
How to cite: Pekov, I.V., Zelenski, M.E., Zubkova, N.V., Yapaskurt, V.O., Chukanov, N.V., Belakovskiy, D.I. and Pushcharovsky, D.Y. (2011) Calciolangbeinite, IMA 2011-067. CNMNC Newsletter No. 11, December 2011, page 2890; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-068**
Ferrovalleriite
$2(Fe,Cu)S{\cdot}1.5Fe(OH)_2$
Oktyabr'sky mine, Talnakh, Norilsk area, Krasnoyarsk Krai, Siberia, Russia
Igor V. Pekov*, Evgeny V. Sereda, Vasily O. Yapaskurt, Yury S. Polekhovsky, Sergey N. Britvin and Nikita V. Chukanov
*E-mail: igorpekov@mail.ru
Fe^{2+}-dominant analogue of valleriite
Trigonal: $R\bar{3}m$, $R3m$ or $R32$
a = 3.792(2), c = 34.06(3) Å
11.42(18), 5.69(100), 3.784(17), 3.268(58), 2.370(9), 1.894(34), 1.871(45), 1.593(13)
The type specimen is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4108/1
How to cite: Pekov, I.V., Sereda, E.V., Yapaskurt, V.O., Polekhovsky, Y.S., Britvin, S.N. and Chukanov, N.V. (2011) Ferrovalleriite, IMA 2011-068. CNMNC Newsletter No. 11, December 2011, page 2891; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-069**
Paseroite
$PbMn^{2+}(Fe^{3+},\square)_2(V^{5+},Ti,\square)_{18}O_{38}$
Molinello mine, Val Graveglia, Ne, Genova, eastern Liguria, northern Apennines, Italy (44º20′43″N 9º27′32″)
Stuart J. Mills*, Luca Bindi, Marcella Cadoni, Marco E. Ciriotti and Anthony R. Kampf
*E-mail: smills@museum.vic.gov.au
Vanadium analogue of senaite
Trigonal: $R\bar{3}$; structure determined
a = 10.3894(5), c = 20.8709(8) Å
3.417(100), 3.012(21), 2.896(61), 2.858(36), 2.765(27), 2.260(85), 2.149(65), 1.809(57)
Cotype material is deposited in the mineralogical collections of the Museo di Storia Naturale, Sezione di Mineralogia e Litologia, Università di Firenze, Firenze, Italy, catalogue number 3111/I, and in the mineralogical collections of the Museo Regionale di Scienze Naturali, Torino, Italy, catalogue number 15900
How to cite: Mills, S.J., Bindi, L., Cadoni, M., Ciriotti, M.E. and Kampf, A.R. (2011) Paseroite, IMA 2011-069. CNMNC Newsletter No. 11, December 2011, page 2891; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-070**
Buseckite
(Fe,Zn,Mn)S
Zaklodzie meteorite, Zamość, Lubelskie, Poland
Chi Ma
*E-mail: chi@gps.caltech.edu
Wurtzite group
Hexagonal: $P6_3mc$
a = 3.8357, c = 6.3002 Å
3.322(100), 3.150(62), 2.938(90), 2.286(36), 1.918(76), 1.775(76), 1.638(48), 1.078(28)
The type specimen is deposited in the collections of the Smithsonian Institution's National Museum of Natural History, Washington DC, USA, specimen number USNM 7607
How to cite: Ma, C. (2011) Buseckite, IMA 2011-070. CNMNC Newsletter No. 11, December 2011, page 2891; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-071**
Fluor-elbaite
$Na(Li_{1.5}Al_{1.5})Al_6(Si_6O_{18})(BO_3)_3(OH)_3F$
Cruzeiro mine, Minas Gerais, Brazil, and the Aqueana pegmatite (Uruba pegmatite), Aracuai, Minas Gerais, Brazil
Ferdinando Bosi*, Giovanni B. Andreozzi, Henrik Skogby, Aaron Lussier, Neil A. Ball and Frank C. Hawthorne*
*E-mail: ferdinando.bosi@uniroma1.it; frank_hawthorne@umanitoba.ca
Tourmaline supergroup
Trigonal: $R3m$; structure determined
a = 15.8720(2), c = 7.1103(1) Å (Cruzeiro mine)

4.200(57), 3.974(66), 3.447(99), 2.938(100), 2.568(93), 2.032(42), 1.649(29), 1.445(29)
The holotype specimen from the Cruzeiro mine is deposited in the collections of the Museum of Mineralogy, Earth Sciences Department, Sapienza University of Rome, Piazzale Aldo Moro 5, 00185 Rome, Italy, catalogue number 33045
How to cite: Bosi, F., Andreozzi, G.B., Skogby, H., Lussier, A., Ball, N.A. and Hawthorne, F.C. (2011) Fluor-elbaite, IMA 2011-071. CNMNC Newsletter No. 11, December 2011, page 2891; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-072**
Argesite
$(NH_4)_7Bi_3Cl_{16}$
La Fossa crater, Vulcano, Aeolian Islands, Italy
Francesco Demartin*, Italo Campostrini, Carlo Castellano, Carlo Maria Gramaccioli
*E-mail: francesco.demartin@unimi.it
New structure type
Trigonal: $R\bar{3}c$; structure determined
a = 13.093(1), c = 102.682(9) Å
6.46(11), 6.14(16), 5.71(11), 3.808(44), 3.164(100), 2.742(24), 1.906(16), 1.686(13)
Type material is deposited in the Reference Collection of the DCSSI, University of Milan, Milan, Italy, sample number 2011-04
How to cite: Demartin, F., Campostrini, I., Castellano, C. and Gramaccioli, C.M. (2011) Argesite, IMA 2011-072. CNMNC Newsletter No. 11, December 2011, page 2892; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-073**
Vigrishinite
$Zn_2Ti_{4-x}Si_4O_{14}(OH,H_2O,\square)_8$ ($x < 1$)
Pegmatite number 71, Malyi Punkaruaiv Mountain, Lovozero alkaline complex, Kola Peninsula, Russia
Igor V. Pekov*, Sergey N. Britvin, Natalia V. Zubkova, Nikita V. Chukanov, Igor A. Bryzgalov, Inna S. Lykova, Dmitriy I. Belakovskiy and Dmitry Y. Pushcharovsky
*E-mail: igorpekov@mail.ru
Heterophyllosilicate of the bafertisite mero-plesiotype series
Triclinic: $P\bar{1}$; structure determined
a = 8.743(9), b = 8.698(9), c = 11.581(11) Å, α = 91.54(8), β = 98.29(8), γ = 105.65(8)°
11.7(67), 8.27(50), 7.37(27), 6.94(43), 5.73(54), 4.17(65), 2.861(100), 2.609(30)
Type material is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4156/1
How to cite: Pekov, I.V., Britvin, S.N., Zubkova, N.V., Chukanov, N.V., Bryzgalov, A.A., Lykova, I.S., Belakovskiy, D.I. and Pushcharovsky, D.Y. (2011) Vigrishinite, IMA 2011-073. CNMNC Newsletter No. 11, December 2011, page 2892; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-074**
Umbrianite
$K_7Na_2Ca_2[Al_3Si_{10}O_{29}]F_2Cl_2$
Vispi quarry, Pian di Celle volcano, San Venanzo, Terni Province, Umbria, Italy (42°51′49.71″N 12°16′3.03″E)
Victor V. Sharygin*, Igor V. Pekov, Natalia V. Zubkova, Alexander P. Khomyakov, Francesco Stoppa and Dmitry Y. Pushcharovsky
*E-mail: sharygin@igm.nsc.ru
New structure type
Orthorhombic: *Pmmn*; structure determined
a = 7.0618(5), b = 38.420(2), c = 6.5734(4) Å
9.65(100), 6.91(43), 6.59(97), 3.884(25), 3.293(77), 3.118(70), 2.903(52), 2.819(53)
Type material is deposited in the collections of the Fersman Mineralogical Museum of the Russian Academy of Sciences, Moscow, Russia, registration number 4157/1
How to cite: Sharygin, V.V., Pekov, I.V., Zubkova, N.V., Khomyakov, A.P., Stoppa, F. and Pushcharovsky, D.Y. (2011) Umbrianite, IMA 2011-074. CNMNC Newsletter No. 11, December 2011, page 2892; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-078**
Betpakdalite-NaNa
$[Na_2(H_2O)_{16}Na(H_2O)_6][Mo_8As_2Fe^{3+}_3O_{33}(OH)_4]$
Chuquicamata mine, Antofagasta, Chile
Anthony R. Kampf* and Stuart J. Mills
*E-mail: akampf@nhm.org
Betpakdalite group
Monoclinic: $C2/m$; structure determined
a = 19.2370(12), b = 11.0945(7), c = 15.1459(9) Å, β = 130.342(1)°
11.586(27), 9.640(30), 8.930(100), 7.389(33), 3.697(25), 3.168(25), 2.980(24), 2.862(27)
Type material is deposited in the collections of the Natural History Museum of Los Angeles County, Los Angeles, California, USA, catalogue

numbers 63570 and 63571
How to cite: Kampf, A.R. and Mills, S.J. (2011) Betpakdalite-NaNa, IMA 2011-078. CNMNC Newsletter No. 11, December 2011, page 2892; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2011-079**
Obradovicite-NaCu
$Na_2(H_2O)_{17}Cu(H_2O)_6][Mo_8As_2Fe^{3+}_3O_{34}(OH)_3]$
Chuquicamata mine, Antofagasta, Chile
Anthony R. Kampf* and Stuart J. Mills
*E-mail: akampf@nhm.org
Obradovicite group
Orthorhombic: *Pnmb*; structure determined
a = 14.872(4),b = 11.091(3), c = 15.032(4) Å
10.483(43), 8.936(100), 7.452(21), 3.226(25), 2.980(25), 2.898(29), 2.773(22), 2.598(23)
Type material is deposited in the collections of the Colorado School of Mines Geology Museum, Golden, Colorado, USA, catalogue number 86.496
How to cite: Kampf, A.R. and Mills, S.J. (2011) Obradovicite-NaCu, IMA 2011-079. CNMNC Newsletter No. 11, December 2011, page 2893; *Mineralogical Magazine*, **75**, 2887–2893.

IMA No. **2007-018a**
Fengchengite
$Na_{12}\square_3(Ca,Sr)_6Fe^{3+}_3Zr_3Si(Si_{25}O_{73})(H_2O,OH)_3(OH,Cl)_2$
Saima Town, situated about 60 km NNE of Fengcheng City, Liaoning Province, China
Shen Ganfu*, Xu Jinsha, Yao Peng, and Li Guowu
*E-mail: sgf829@yahoo.com.cn
Eudialyte group
Trigonal: $R\bar{3}m$; structure determined
a = 14.2467(6), c = 30.033(2) Å
7.186(55), 5.761(44), 4.187(53), 3.201(47), 2.978(61), 2.857(100), 2.146(29), 1.771(36)
Type material is deposited in the collections of the Geological Museum of China, Beijing, China, registered number M11632
How to cite: Shen, G., Xu, J., Yao, P., and Li, G. (2011) Fengchengite, IMA 2007-018a. CNMNC Newsletter No. 11, December 2011, page 2893; *Mineralogical Magazine*, **75**, 2887–2893.

Erratum

IMA No. **2011-029**
In CNMNC Newsletter No. 10 (*Mineralogical Magazine*, **75**, 2549–2561), the formula for IMA No. **2011-029**, oscarkempffite, was given incorrectly as $Ag_{10}Pb_4(Sb_{17}Bi_9)_{26}S_{48}$. The correct formula is $Ag_{10}Pb_4(Sb_{17}Bi_9)_{\Sigma 26}S_{48}$, or more simply, $Ag_{10}Pb_4(Sb_{17}Bi_9)S_{48}$.

APPROVALS WITHDRAWN IN OCTOBER 2011

IMA No. **2010-049**
Approval for the mineral IMA 2010-049 ("steedeite") has been withdrawn. Further investigations have shown that the mineral is identical to catapleiite.