



## 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 X-ray powder diffraction pattern

Type specimen repository and specimen number

Citation details for the mineral prior to publication of full description

**Citation details concern the fact that this information will be published in the *European Journal of Mineralogy* on a routine basis, as well as being added month by month to the Commission's web site.**

**It is still a requirement for the authors to publish a full description of the new mineral.**

NO OTHER INFORMATION WILL BE RELEASED BY THE COMMISSION

### NEW MINERAL PROPOSALS APPROVED IN APRIL 2017

IMA No. 2016-116

Ferro-tschermakite

$\square\text{Ca}_2(\text{Fe}_3^{2+}\text{Al}_2)(\text{Si}_6\text{Al}_2)\text{O}_{22}(\text{OH})_2$

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  $a = 9.7598(6)$ ,  $b = 18.022(1)$ ,  $c = 5.3299(3)$  Å,  $\beta = 104.826(1)^\circ$

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-tschemmakite, IMA 2016-116. CNMNC Newsletter No. 37, June 2017, page 529; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2016-117**

Protoenstatite  
 $\text{Mg}_2\text{Si}_2\text{O}_6$   
 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*  
 $a = 9.25(1)$ ,  $b = 8.78(1)$ ,  $c = 5.32(1)$  Å  
 $3.243(20)$ ,  $3.184(47)$ ,  $3.180(100)$ ,  $2.909(38)$ ,  $2.732(32)$ ,  $2.556(22)$ ,  $2.471(24)$ ,  $2.306(33)$   
 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 530; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2017-001**

Greenlizardite  
 $(\text{NH}_4)\text{Na}(\text{UO}_2)_2(\text{SO}_4)_2(\text{OH})_2 \cdot 4\text{H}_2\text{O}$   
 Green Lizard Mine, White Canyon mining district, San Juan Co., Utah, USA ( $37^\circ 34' 37.10''\text{N}$ ,  $110^\circ 17' 52.80''\text{W}$ )  
 Anthony R. Kampf\*, Jakub Plášil, Barbara P. Nash and Joe Marty  
 \*E-mail: akampf@nhm.org  
 Structurally related to johannite, deliensite and plášilite  
 Triclinic:  $\overline{P1}$ ; structure determined  
 $a = 6.8362(2)$ ,  $b = 9.5127(3)$ ,  $c = 13.898(1)$  Å,  
 $\alpha = 98.636(7)$ ,  $\beta = 93.713(7)$ ,  $\gamma = 110.102(8)^\circ$   
 $6.80(100)$ ,  $6.06(36)$ ,  $5.75(62)$ ,  $4.41(32)$ ,  $3.404(56)$ ,  $3.126(60)$ ,  $3.073(26)$ ,  $2.988(34)$   
 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 530; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2017-002**

Batagayite  
 $\text{CaZn}_2(\text{Zn,Cu})_6(\text{PO}_4)_4[\text{PO}_3(\text{OH})]_3 \cdot 12\text{H}_2\text{O}$   
 Kester deposit, Arga-Ynnykh-Khai massif, SE Yakutia, Russia

Victor N. Yakovenchuk, Yakov A. Pakhomovsky, Nataliya G. Konoplyova, Taras L. Panikorovskii, 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*<sub>1</sub>; structure determined  
 $a = 8.4264(4)$ ,  $b = 12.8309(6)$ ,  $c = 14.6928(9)$  Å,  
 $\beta = 98.514(6)^\circ$   
 $14.59(100)$ ,  $6.34(25)$ ,  $6.02(11)$ ,  $4.864(37)$ ,  $4.766(13)$ ,  $3.102(20)$ ,  $2.678(11)$ ,  $2.411(16)$   
 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., Panikorovskii, 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 530; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2017-003**

Aurihydrargyrumite  
 $\text{Au}_6\text{Hg}_5$   
 Iyoki, Uchiko, Ehime Prefecture, Shikoku, Japan  
 Daisuke Nishio-Hamane\* and Tetsuo Minakawa  
 \*E-mail: hamane@issp.u-tokyo.ac.jp  
 Known synthetic analogue  
 Hexagonal: space group *P6*<sub>3</sub>/*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 530; *European Journal of Mineralogy*, **29**, 529–533.

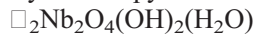
**IMA No. 2017-004**

Katerinopouliosite  
 $(\text{NH}_4)_2\text{Zn}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$   
 Esperanza mine, Lavrion District, Attikí Prefecture, Greece ( $37^\circ 43' 32''\text{N}$ ,  $24^\circ 1' 57''\text{E}$ )  
 Nikita V. Chukanov\*, Igor V. Pekov, Dmitry I. Belakovskiy, Sergey N. Britvin, Panagiotis Voudouris, Andreas Magganis and Vasileios Stergiou  
 \*E-mail: nikchukanov@yandex.ru  
 The Zn analogue of boussingaultite  
 Monoclinic: space group *P2*<sub>1</sub>/*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 530; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2017-005**

Hydrokenopyrochlore



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

$a = 10.4887(8) \text{ \AA}$

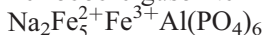
3.677(w), 3.136(s), 3.006(s), 2.598(w), 2.010(ms), 1.846(s), 1.588(ms), 1.509(m)

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 531; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2017-006**

Ferrobobfergusonite



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

$a = 12.7156(3)$ ,  $b = 12.3808(3)$ ,  $c = 10.9347(3) \text{ \AA}$ ,  $\beta = 97.3329(10)^\circ$

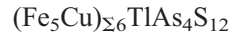
6.182(26), 4.180(34), 4.085(35), 3.019(24), 2.845(34), 2.790(38), 2.489(37), 2.070(26)

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 531; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2017-007**

Ferrovorontsovite



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

$a = 10.2390(7) \text{ \AA}$

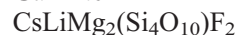
4.175(93), 3.646(13), 2.952(100), 2.735(57), 2.562(18), 1.869(11), 1.810(40), 1.543(24)

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 531; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2017-008**

Garmite



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  $Cm$

$a = 5.234(2)$ ,  $b = 9.042(4)$ ,  $c = 10.780(4) \text{ \AA}$ ,  $\beta = 99.73(4)^\circ$

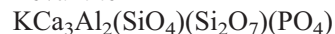
4.48(35), 3.70(70), 3.45(44), 3.20(31), 2.608(70), 2.580(100), 2.241(45), 2.187(80)

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 531; *European Journal of Mineralogy*, **29**, 529–533.

**IMA No. 2017-010**

Levantite



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  
 $a = 12.1006(9)$ ,  $b = 5.1103(4)$ ,  $c = 10.8252(9)$  Å,  
 $\beta = 107.237(8)^\circ$   
 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 531; *European Journal of Mineralogy*, **29**, 529–533.

#### 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 ( $36^\circ 43' 24''\text{N}$ ,  
 $143^\circ 38' 56''\text{E}$ )

Stuart J. Mills, Anthony R. Kampf\*, Patrick Sutton and William D. Birch

\*E-mail: akampf@nhm.org

Betpakdalite group

Monoclinic:  $C2/m$ ; structure determined  
 $a = 19.51(1)$ ,  $b = 11.131(5)$ ,  $c = 15.37(1)$  Å,  
 $\beta = 130.93(5)^\circ$

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 532; *European Journal of Mineralogy*, **29**, 529–533.

#### IMA No. 2017-012

Schmidite  
 $[\text{Zn}_2(\text{Fe}^{3+}, \text{Mn}^{2+})_2\text{Fe}^{3+}(\text{PO}_4)_3(\text{OH})_3(\text{H}_2\text{O})_6] \cdot 2\text{H}_2\text{O}$   
 Cornelia Mine Open Cut, 67 m level, Hagendorf-Süd  
 pegmatite, Hagendorf, Oberpfalz, Bavaria, Germany  
 ( $49^\circ 39' 1''\text{N}$ ,  $12^\circ 27' 35''\text{E}$ )

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:  $Pmb$ ; 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 532; *European Journal of Mineralogy*, **29**, 529–533.

## NEW MINERAL PROPOSALS APPROVED IN MAY 2017

#### IMA No. 2017-013

Chlorellestadite

$\text{Ca}_5(\text{SiO}_4)_{1.5}(\text{SO}_4)_{1.5}\text{Cl}$

NW slope of the Shadil Khokh volcano, Kel'sky volcanic Plateau, Greater Caucasus Mountain Range, South Ossetia, Georgia ( $42^\circ 32' 32.5''\text{N}$ ,  $44^\circ 17' 50.7''\text{E}$ )  
 Dorota Środek, Maria Książek, Irina O. Galuskina\*, Joachim Kusz, Mateusz Dulski, Viktor Gazeev and Evgeny Galuskin

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

Apatite supergroup

Hexagonal:  $P6_3/m$ ; 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 532; *European Journal of Mineralogy*, **29**, 529–533.

#### IMA No. 2017-014

Sharyginite

$\text{Ca}_3\text{TiFe}_2\text{O}_8$

Caspar quarry, Bellerberg volcano, Eastern Eifel region, Rhineland-Palatinate, Germany ( $50^\circ 21' 6''\text{N}$ ,  $7^\circ 14' 2''\text{E}$ )

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

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

The Fe analogue of shulamitite

Orthorhombic:  $Pmc2_1$ ; structure determined

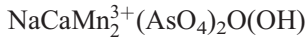
$a = 11.150(8)$ ,  $b = 5.528(2)$ ,  $c = 5.423(2)$  Å  
 2.763(32), 2.712(27), 2.679(100), 1.936(36), 1.857  
 (19), 1.580(18), 1.559(12), 1.341(11)

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., Jezak, L., Ternes, B., Wojdyła, J., Krzykowski, T., Pautov, L.A. and Galuskin, E.V.

(2017) Sharyginite, IMA 2017-014. CNMNC Newsletter No. 37, June 2017, page 532; *European Journal of Mineralogy*, **29**, 529–533.

#### IMA No. 2017-016

Piccoliite



In the dumps of the Montaldo di Mondovì mine, Borgata Oberti, Montaldo di Mondovì, 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 Bosì, 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

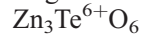
4.85(m), 3.470(m), 3.167(vs), 2.742(m), 2.683(ms), 2.580(ms), 2.495(m), 2.325(m)

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., Bosì, F., Kolitsch, U., Paar, W.H., Blass, G. and Bittarello, E. (2017) Piccoliite, IMA 2017-016. CNMNC Newsletter No. 37, June 2017, page 533; *European Journal of Mineralogy*, **29**, 529–533.

#### 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

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## 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  $(\text{Be}, \text{Li})_{2-x}$ , 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:  $(\text{Ca}, \text{REE})_4\text{Ce}_2\text{Al}\square_2(\text{B}_4\text{Si}_4\text{O}_{22})(\text{OH})_2$  and  $(\text{Ca}, \text{REE})_4\text{Y}_2\text{Al}\square_2(\text{B}_4\text{Si}_4\text{O}_{22})(\text{OH})_2$ , respectively.