

**NEW MINERALS APPROVED IN 2010  
NOMENCLATURE MODIFICATIONS APPROVED IN 2010  
BY THE  
COMMISSION ON NEW MINERALS, NOMENCLATURE AND  
CLASSIFICATION  
INTERNATIONAL MINERALOGICAL ASSOCIATION**

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The information given here is provided by the Commission on New Minerals and Mineral Names, I.M.A., for comparative purposes and as a service to mineralogists working on new species.

Each mineral is described in the following format:

- IMA number
- Type locality
- Corresponding author
- Chemical formula
- 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

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**PROPOSALS APPROVED IN JANUARY 2010**

IMA No. **2009-076**

Sebastião Cristino pegmatite, near Mendes Pimentel and Linópolis, Minas Gerais, Brazil (18°42'S 41°27'W)

Frédéric Hatert

$\text{Na}_2\text{Fe}^{2+}\text{MgAl}(\text{PO}_4)_3$

Wyllieite group

Monoclinic:  $P2_1/n$ ; structure determined

$a$  11.910(2),  $b$  12.383(3),  $c$  5.1798(1) Å,  $\beta$  114.43(3)°

3.468(35), 3.047(100), 2.849(80), 2.810(35), 2.711(40), 2.688(90), 2.500(40),  
2.074(30)

**IMA No. 2009-077**

Maria Catalina mine, Tierra Amarilla, Chile (22°3'S 68°30' W)

Hexiong Yang



Roselite group

Monoclinic:  $P2_1/c$ ; structure determined

$a$  5.8618(2),  $b$  12.7854(5),  $c$  5.7025(2) Å,  $\beta$  109.425(2)°

5.087(42), 4.177(59), 3.800(41), 3.377(92), 3.190(56), 2.983(89), 2.827(100),  
2.114(49)

**IMA No. 2009-078**

Grubependity Lake cirque (кар озера Грубепендиты), Grubependity  
Lake, Maldynyrd range, Kozhim River basin, Prepolar Ural, Komi Republic, Russia,  
several kilometres from the Chudnoe Pd–Au–Cr deposit

Stuart J. Mills



Alunite supergroup

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

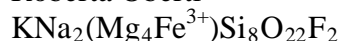
$a$  7.0316(3),  $c$  16.5151(8) Å

5.755(27), 3.538(55), 2.982(100), 2.211(28), 2.179(19), 1.914(38), 1.767(24),  
1.298(18)

**IMA No. 2009-079**

About 25 km southwest from Monte Metocha, Xixano region, north-eastern  
Mozambique

Roberta Oberti



Amphibole group

Monoclinic:  $C2/m$ ; structure determined

$a$  = 9.9591(4),  $b$  = 17.9529(6),  $c$  = 5.2867(2) Å,  $\beta$  = 103.340(1)°

8.499(58), 3.394(81), 3.286(43), 3.166(60), 2.746(43), 2.707(100), 2.583(45),  
2.537(70)

**IMA No. 2009-080**

Prasolovskoe gold deposit, Kunashir Island, Kurile Islands, Russian Federation  
(44°23'N 146°01'E)

Vladimir A. Kovalenker



New structure type

Trigonal:  $R\bar{3}$  or  $R\bar{3}$

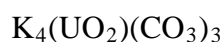
$a$  = 15.812(2),  $c$  = 19.622(4) Å

3.727(20), 2.996(50), 2.510(30), 2.201(100), 2.152(20), 2.079(30), 2.046(20),  
1.817(20)

**IMA No. 2009-081**

Giftkiesstollen adit, Jáchymov, Czech Republic

Roman Skála



Known structure type

Monoclinic:  $C2/c$ ; structure determined

$a = 10.2380(2)$ ,  $b = 9.1930(2)$ ,  $c = 12.2110(3)$  Å,  $\beta = 95.108(2)^\circ$

6.061(55), 5.793(30), 5.087(57), 3.740(100), 3.393(44), 2.408(33), 2.281(52),  
1.873(40)

**IMA No. 2009-082**

Shiti barium deposit, Dabashan region, Shanxi Province, China (32°43'45" to  
32°45'06"N 109°08'22" to 109°10'20"E)

Jiajun Liu



New structure type

Monoclinic:  $Cc$ ; structure determined

$a = 5.2050(12)$ ,  $b = 9.033(2)$ ,  $c = 32.077(8)$  Å,  $\beta = 93.49(8)^\circ$

15.87(7), 5.340(91), 4.010(10), 3.209(23), 2.676(100), 2.294(29), 2.008(11), 1.607(4)

**IMA No. 2009-083**

Jeffrey Mine, Asbestos, Shipton Township, Richmond County, Quebec, Canada

Ralph Rowe



Isostructural with auricupride

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

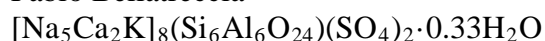
$a = 3.7344(7)$  Å

3.728(27), 2.639(22), 2.155(100), 1.867(45), 1.671(10), 1.525(6), 1.320(25),  
1.127(22)

**IMA No. 2009-084**

Sabatini volcanic complex, Valle Biachella, Sacrofano community, Rome Province,  
Latium, Italy

Fabio Bellatreccia



Cancrinite group

Trigonal:  $R\bar{3}2$ ; structure determined

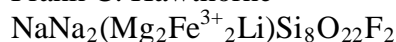
$a = 12.8770(7)$ ,  $c = 95.244(6)$  Å

3.80(52), 3.72(100), 3.60(53), 3.58(60), 3.55(24), 3.23(65), 3.22(38), 2.65(100)

**IMA No. 2009-085**

Verkhnee Espe deposit, Akjailyautas Mountains, Kazakhstan (48°03'-48°10'N 81°26'-  
81°29'E)

Frank C. Hawthorne



Amphibole group

Monoclinic:  $C2/m$ ; structure determined

$a = 9.8297(3)$ ,  $b = 17.9257(6)$ ,  $c = 5.2969(2)$  Å,  $\beta = 103.990(1)^\circ$

8.434(40), 4.464(30), 3.405(30), 3.137(20), 2.718(100), 2.541(20), 2.325(15),  
2.166(20)

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**PROPOSALS APPROVED IN FEBRUARY 2010**

IMA No. **2009-086**

Vico volcanic complex, Capranica, Viterbo Province, Latium, Italy

Athos Maria Callegari

$\text{KCaNaAl}_4\text{B}_4\text{Si}_2\text{O}_{18}$

New structure type

Monoclinic:  $P2_1/n$ ; structure determined

$a = 4.8507(2)$ ,  $b = 16.6156(6)$ ,  $c = 20.5445(7)$  Å,  $\beta = 90.245(1)^\circ$   
4.104(90), 3.424(83), 3.234(100), 3.119(32), 2.425(31), 2.405(37), 2.184(38),  
1.564(30)

IMA No. **2009-087**

Silver Coin mine, Valmy, Humboldt County, Nevada, USA (40°55'44"N  
117°19'26"W) and Huber open pit, Krásno, Czech Republic (50°06'N 12°48'E)  
(cotype localities)

Stuart Mills

$\text{Ca}_2\text{Al}_7(\text{PO}_4)_2(\text{PO}_3\text{OH})_2(\text{OH},\text{F})_{15}\cdot 8\text{H}_2\text{O}$

New structure type

Trigonal:  $P321$ ; structure determined

$a = 6.988(1)$ ,  $c = 16.707(3)$  Å  
16.739(100), 6.054(18), 5.687(13), 3.488(9), 2.967(45), 2.219(19), 1.896(13),  
1.744(17)

IMA No. **2009-088**

The chromite deposits of Nausahi, Keonjhar District, Orissa, India

Frank C. Hawthorne

$\text{NaCr}_3(\text{Al}_4\text{Mg}_2)(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3\text{O}$

Tourmaline group

Trigonal:  $R3m$ ; structure determined

$a = 16.036(1)$ ,  $c = 7.319(1)$  Å  
6.487(60), 5.033(20), 4.642(20), 4.262(30), 4.010(50), 3.545(30), 3.013(35),  
2.598(100)

IMA No. **2009-089**

Crabtree Emerald mine, Mitchell County, North Carolina, USA

Frank C. Hawthorne

$\text{NaMg}_3\text{Al}_6\text{Si}_6\text{O}_{18}(\text{BO}_3)_3(\text{OH})_3\text{F}$

Tourmaline group

Trigonal:  $R3m$ ; structure determined

$a = 15.955(3)$ ,  $c = 7.153(2)$  Å  
6.375(19), 3.998(22), 3.475(100), 2.961(60), 2.583(67), 2.392(14), 2.123(14),  
2.043(19)

IMA No. **2009-090**

Upper Chegem volcanic structure, Kabardino-Balkaria, North Caucasus, Russia  
(43°17'N 43°6'E)

Evgeny V. Galuskin

$\text{CaSnO}_3$

Perovskite group

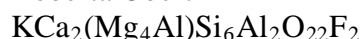
Orthorhombic:  $Pbnm$ ; structure of synthetic analogue known

$a = 5.56(3)$ ,  $b = 5.71(3)$ ,  $c = 7.943(3)$  Å  
3.984(52), 3.970(19), 2.855(43), 2.812(100), 2.780(19), 1.992(13), 1.985(13),  
1.640(13)

IMA No. **2009-091**

Tranomaro area, Fort Dauphine region, Madagascar

Roberta Oberti



Amphibole group

Monoclinic:  $C2/m$ ; structure determined

$a = 9.9104(2)$ ,  $b = 17.9739(4)$ ,  $c = 5.3205(1)$  Å,  $\beta = 105.534(2)^\circ$

8.413(45), 3.374(31), 3.270(55), 3.133(100), 2.934(29), 2.809(47), 2.698(39),

1.647(29)

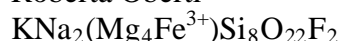
### APPROVAL WITHDRAWN IN FEBRUARY 2010

IMA No. **2009-079**

About 25 km southwest from Monte Metocha, Xixano region, north-eastern

Mozambique

Roberta Oberti



Amphibole group

Monoclinic:  $C2/m$ ; structure determined

$a = 9.9591(4)$ ,  $b = 17.9529(6)$ ,  $c = 5.2867(2)$  Å,  $\beta = 103.340(1)^\circ$

8.499(58), 3.394(81), 3.286(43), 3.166(60), 2.746(43), 2.707(100), 2.583(45),

2.537(70)

1.873(40)

Approval has been **withdrawn** for the above mineral IMA 2009-079. The previous Chairman of CNMNC, Dr Ernst Burke, has noted that the same mineral was approved as IMA 85-023. At the same time that the mineral was approved, voting on the proposed name was suspended because of an imminent report on the nomenclature of the amphibole group. Subsequently, Hogarth *et al.* (1987) published definitive data for the mineral without noting that it had been approved by IMA, describing it as "potassium fluor-magnesio-arfvedsonite". As a result of later enquiries, and in light of the currently accepted amphibole nomenclature, Hogarth (2006) published a note in which the mineral approval was reported and named it fluoro-potassic-magnesio-arfvedsonite. This is the correct name for the mineral, renamed with IMA approval.

Hogarth, D.D. (2006) Fluoro-potassic-magnesio-arfvedsonite,  $\text{KNa}_2\text{Mg}_5\text{Si}_8\text{O}_{22}\text{F}_2$ , from the Outaouais region, Quebec, Canada. *Canadian Mineralogist*, **44**, 289.

Hogarth, D.D., Chao, G.Y. and Townsend, M.G. (1987) Potassium- and fluorine-rich amphiboles from the Gatineau area, Quebec. *Canadian Mineralogist*, **25**, 739-753.

### NOMENCLATURE PROPOSAL APPROVED IN JANUARY 2010

#### IMA 09-D: The early publication of new mineral names

The Commission has determined to change the way preliminary data for newly approved minerals will be reported. Five additional items on the new minerals will be released every month by the CNMNC as follows:

- the mineral name (**unless the authors explicitly ask to keep it confidential until a full description is published**);
- the full authorship;
- the email contact of the corresponding author;
- the place of preservation and the catalogue number of the type material;

- how to cite the new mineral.

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

This change will come into effect in March 2010.

**IMA 09-E Discreditation of “orthobrochantite” (IMA 78–064) as the MDO1 polytype of brochantite**

Orthobrochantite is discredited. It corresponds to the MDO1 polytype of brochantite.