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Supporting information for article:

Synthesis, crystal structure and luminescence properties of a new samarium borate phosphate, CsNa2Sm2(BO3)(PO4)2

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Table S1 Fractional atomic coordinates and isotropic or equivalent isotropic displacement parameters (Å^2) of $CsNa_2Sm_2(BO_3)(PO_4)_2$.

	X	*y*	*z*	U_{iso}*/U_{eq}
Cs1	0.500000	0.48636 (5)	0.750000	0.0370 (2)
Na1	0.7563 (3)	0.74620 (18)	0.750000	0.0248 (6)
Sm1	1.000000	0.61983 (2)	0.52841 (3)	0.00667 (11)
B1	1.000000	0.5156 (7)	0.750000	0.0109 (19)
P1	0.500000	0.68276 (10)	0.52246 (13)	0.0083 (3)
O1	1.000000	0.4772 (3)	0.6361 (4)	0.0167 (10)
O2	1.000000	0.6087 (4)	0.750000	0.0183 (14)
O3	0.500000	0.7613 (3)	0.6133 (4)	0.0127 (9)
O4	0.500000	0.7240 (3)	0.3918 (4)	0.0141 (9)
O5	0.6758 (4)	0.62691 (19)	0.5449 (3)	0.0196 (7)

Table S2 Atomic anisotropic displacement parameters (Å^2) of $CsNa_2Sm_2(BO_3)(PO_4)_2$.

	U^{11}	U^{22}	U^{33}	U^{12}	U^{13}	U^{23}
Cs1	0.0384 (4)	0.0263 (4)	0.0463 (5)	0.000	0.000	0.000
Na1	0.0134 (13)	0.0473 (19)	0.0138 (13)	−0.0010 (12)	0.000	0.000
Sm1	0.00608 (16)	0.00696 (17)	0.00696 (17)	0.000	0.000	−0.00011 (11)
B1	0.008 (4)	0.023 (5)	0.002 (4)	0.000	0.000	0.000
P1	0.0050 (7)	0.0097 (7)	0.0101 (7)	0.000	0.000	0.0016 (6)
O1	0.031 (3)	0.007 (2)	0.012 (2)	0.000	0.000	−0.0042 (17)
O2	0.038 (4)	0.009 (3)	0.008 (3)	0.000	0.000	0.000
O3	0.015 (2)	0.013 (2)	0.010 (2)	0.000	0.000	−0.0034 (17)
O4	0.017 (2)	0.017 (2)	0.008 (2)	0.000	0.000	−0.0008 (17)
O5	0.0075 (15)	0.0171 (17)	0.034 (2)	0.0028 (11)	−0.0006 (14)	0.0071 (14)

Table S3 Select bond distances of $CsNa_2Sm_2(BO_3)(PO_4)_2$.

Cs1—O5^{i}	3.316 (3)	Na1—O5^{i}	2.913 (4)
Cs1—O5^{ii}	3.316 (3)	Sm1—O5^{x}	2.299 (3)
Cs1—O5^{iii}	3.316 (3)	Sm1—O5	2.299 (3)
Cs1—O5	3.316 (3)	Sm1—O1^{xi}	2.305 (4)
Cs1—O4^{iv}	3.557 (4)	Sm1—O3^{ix}	2.369 (4)
Cs1—O4^{v}	3.557 (4)	Sm1—O2	2.3826 (5)
Cs1—O1	3.7393 (14)	Sm1—O1	2.468 (4)
Cs1—O1^{vi}	3.7393 (14)	Sm1—O4^{ix}	2.537 (4)

Cs1—O1^{i}	3.7393 (14)	B1—O1	1.355 (6)
Cs1—O1^{vii}	3.7393 (14)	B1—O1^{i}	1.355 (6)
Na1—O3^{i}	2.341 (3)	B1—O2	1.423 (11)
Na1—O3	2.341 (3)	P1—O5	1.526 (3)
Na1—O4^{viii}	2.342 (3)	P1—O5^{iii}	1.526 (3)
Na1—O4^{ix}	2.342 (3)	P1—O4	1.537 (4)
Na1—O2	2.717 (5)	P1—O3	1.546 (4)
Na1—O5	2.913 (4)		
O1—B1—O1^{i}	128.6 (9)	O5^{iii}—P1—O4	111.92 (16)
O1—B1—O2	115.7 (4)	O5—P1—O3	109.57 (16)
O1^{i}—B1—O2	115.7 (4)	O5^{iii}—P1—O3	109.57 (16)
O5—P1—O5^{iii}	108.9 (2)	O4—P1—O3	104.8 (2)
O5—P1—O4	111.92 (16)		

Symmetry codes: (i) *x*, *y*, −*z*+3/2; (ii) −*x*+1, *y*, −*z*+3/2; (iii) −*x*+1, *y*, *z*; (iv) −*x*+1, −*y*+1, −*z*+1; (v) −*x*+1, −*y*+1, *z*+1/2; (vi) *x*−1, *y*, *z*; (vii) *x*−1, *y*, −*z*+3/2; (viii) −*x*+3/2, −*y*+3/2, *z*+1/2; (ix) −*x*+3/2, −*y*+3/2, −*z*+1; (x) −*x*+2, *y*, *z*; (xi) −*x*+2, −*y*+1, −*z*+1.