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**Supporting information for article:**

**Crystal structure and pale-yellow emitting properties of K<sub>3</sub>Gd<sub>1-x</sub>DyxB<sub>6</sub>O<sub>12</sub> solid solutions**

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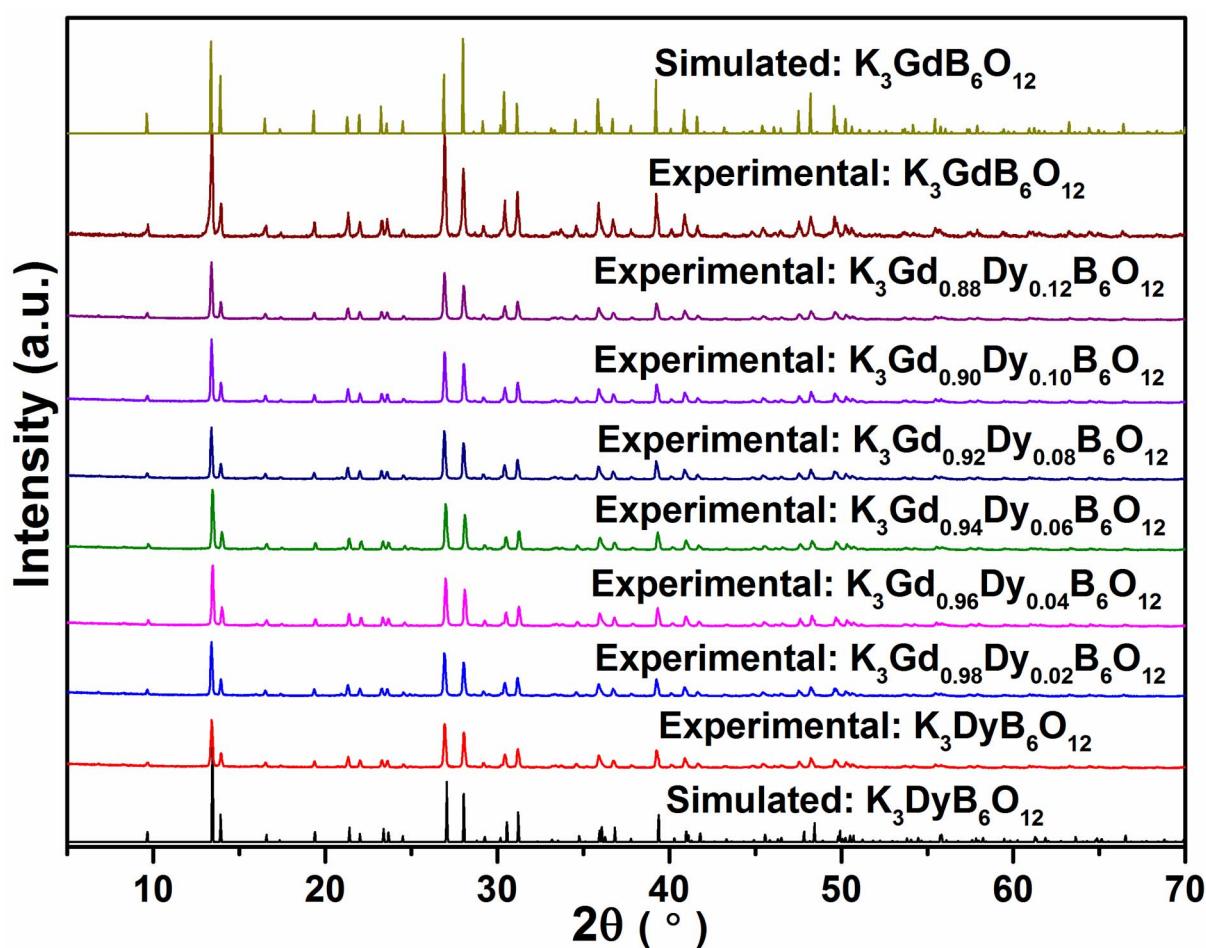
**Table S1** Fractional atomic coordinates and isotropic or equivalent isotropic displacement parameters ( $\text{\AA}^2$ )

	<i>x</i>	<i>y</i>	<i>z</i>	$U_{\text{iso}}^*/U_{\text{eq}}$	Occ. (<1)
Dy1	0.333333	0.666667	0.166667	0.0192 (2)	0.5
Dy2	0.333333	0.666667	0.39295 (2)	0.00748 (13)	
K1	0.333333	0.666667	0.166667	0.0192 (2)	0.5
K2	0.1542 (2)	0.333333	0.333333	0.0304 (5)	
K3	0.333333	0.666667	0.666667	0.0227 (5)	
K4	0.000000	0.46346 (16)	0.500000	0.0251 (4)	
B1	0.5614 (5)	0.7966 (6)	0.5332 (4)	0.0157 (15)	
B2	0.0790 (5)	0.5513 (8)	0.2813 (4)	0.0178 (15)	
B3	-0.0813 (6)	0.5854 (6)	0.333333	0.0146 (16)	
O1	0.4984 (3)	0.7278 (3)	0.4679 (3)	0.0163 (10)	
O2	0.6736 (4)	0.8137 (5)	0.5467 (3)	0.0369 (16)	
O3	0.5218 (3)	0.8515 (4)	0.5889 (2)	0.0173 (8)	
O4	0.0353 (4)	0.5975 (4)	0.3392 (3)	0.0212 (9)	
O5	0.1883 (3)	0.5690 (4)	0.2877 (3)	0.0244 (11)	

**Table S2** Atomic displacement parameters ( $\text{\AA}^2$ )

	$U^{11}$	$U^{22}$	$U^{33}$	$U^{12}$	$U^{13}$	$U^{23}$
Dy1	0.0236 (3)	0.0236 (3)	0.0104 (4)	0.01180 (14)	0.000	0.000
Dy2	0.00815 (14)	0.00815 (14)	0.00615 (17)	0.00407 (7)	0.000	0.000
K1	0.0236 (3)	0.0236 (3)	0.0104 (4)	0.01180 (14)	0.000	0.000
K2	0.0245 (11)	0.0294 (9)	0.0389 (10)	0.0147 (5)	-0.0080 (4)	-0.0159 (7)
K3	0.0156 (7)	0.0156 (7)	0.0370 (14)	0.0078 (3)	0.000	0.000
K4	0.0197 (9)	0.0308 (8)	0.0211 (9)	0.0098 (4)	-0.0015 (7)	-0.0007 (3)
B1	0.012 (2)	0.018 (4)	0.014 (2)	0.006 (2)	-0.0004 (19)	0.000 (2)

B2	0.015 (2)	0.016 (4)	0.019 (2)	0.005 (3)	-0.001 (2)	-0.003 (3)
B3	0.013 (3)	0.013 (3)	0.015 (4)	0.004 (3)	0.0028 (15)	-0.0028 (15)
O1	0.0135 (17)	0.013 (2)	0.0212 (18)	0.0060 (14)	-0.0059 (14)	-0.0040 (14)
O2	0.019 (2)	0.057 (4)	0.044 (3)	0.026 (2)	-0.0176 (19)	-0.036 (2)
O3	0.0132 (18)	0.024 (2)	0.0163 (19)	0.0104 (17)	-0.0019 (15)	-0.0049 (16)
O4	0.017 (2)	0.030 (2)	0.0165 (19)	0.0115 (19)	-0.0042 (16)	-0.0107 (16)
O5	0.0139 (19)	0.029 (3)	0.030 (2)	0.0102 (17)	-0.0083 (16)	-0.0134 (17)



**Figure S1** XRD patterns of powder samples  $K_3Gd_{1-x}Dy_xB_6O_{12}$  ( $x = 0, 0.02, 0.04, 0.06, 0.08, 0.10, 0.12, 1.0$ ), comparing with that simulated from single data of  $K_3DyB_6O_{12}$  and  $K_3GdB_6O_{12}$ .