



Fig. S1 Structures of Ho^{3+} , Yb^{3+} -codoped Bi_2WO_6 with Bi^{3+} substitution

Table S1 Static energies of the optimized structures of Ho^{3+} , Yb^{3+} -codoped Bi_2WO_6

Structure number	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Static energy (eV)	534.27	534.11	534.19	534.08	534.12	534.18	534.17

Fig. S1 shows the possible structures of Bi^{3+} lattice sites in Ho^{3+} , Yb^{3+} -codoped Bi_2WO_6 , which are irreducible structures after accounting for the crystal symmetry and periodicity characteristics. Table S1 shows the static energies of the structures obtained after structural optimization (atom positions only) via VASP.



Fig. S2 Structures of K^+ , Ho^{3+} , and Yb^{3+} -codoped Bi_2WO_6 with Bi^{3+} substitution

Table S2 Static energies of the K^+ , Ho^{3+} , and Yb^{3+} -codoped Bi_2WO_6 structures after optimization

Structure number	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Static energy (eV)	529.01	529.32	528.85	528.96	529.08	529.03	529.19
Structure number	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Static energy (eV)	529.09	529.16	528.89	528.96	529.25	529.04	529.01

Structure number	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Static energy (eV)	528.60	528.90	529.10	528.76	529.15	528.72	529.12
Structure number	(22)	(23)	(24)	(25)	(26)	(27)	(28)
Static energy (eV)	529.14	528.97	529.21	529.05	528.90	529.12	528.64
Structure number	(29)	(30)	(31)	(32)	(33)	(34)	(35)
Static energy (eV)	529.04	529.27	528.77	529.07	528.97	528.85	528.80
Structure number	(36)	(37)	(38)	(39)	(40)	(41)	(42)
Static energy (eV)	529.38	529.24	529.02	529.36	529.12	529.25	529.14

Fig. S2 shows the possible structures of the Bi^{3+} lattice sites in K^+ , Ho^{3+} , and Yb^{3+} -codoped Bi_2WO_6 , which are irreducible structures after accounting for the crystal symmetry and periodicity characteristics. Table S2 shows the static energies of the structures obtained after structural optimization (atom positions only) via VASP.