Table S1 Comparison of Mn^{4+}-doped phosphors

Phosphor	Emission wavelength	Excitation wavelength	TQ (150 °C) compared with 25 °C
KGO: Mn^{4+}	~663 nm	UV (325 nm) and Blue (463 nm)	10%
$Ca_{14}Al_{10}Zn_6O_{35}$:Mn^{4+}	~708 nm	UV (318 nm) and Blue (462 nm, weak)	88%
$CaMg_2Al_{16}O_{27}$:Mn^{4+}	~655 nm	UV (345 nm) and Blue (468 nm, weak)	73%
$Sr_4Al_{14}O_{25}$: Mn^{4+}	~650 nm	UV (300 nm) and Blue (470 nm, weak)	50%
K_2TiF_6:Mn^{4+}	~650 nm	UV (362 nm) and Blue (468 nm)	98%
Mg2TiO4 :Mn^{4+}	~660 nm	UV (350 nm) and Blue (460 nm, weak)	30%
$Mg_{14}Ge_5O_{24}$: Mn^{4+}	~659 nm	UV (325 nm) and Blue (419 nm)	86%