

Table S1. CIE chromaticity coordinates ( $x$ , $y$ ), CCT (K) and quantum efficiency (QE) of $\text{Ca}_2\text{PO}_4\text{Cl}:0.07\text{Eu}^{2+}, y\text{Mn}^{2+}$ ( $\lambda_{\text{ex}}=365$ nm)			
Samples	CIE coordinates ( $x$ , $y$ )	CCT (K)	QE (%)
$\text{Ca}_2\text{PO}_4\text{Cl}:0.07\text{Eu}^{2+}$	(0.1488, 0.0624)	25189	61.3
$\text{Ca}_2\text{PO}_4\text{Cl}:0.07\text{Eu}^{2+}, 0.01\text{Mn}^{2+}$	(0.2002, 0.1176)	15976	53.6
$\text{Ca}_2\text{PO}_4\text{Cl}:0.07\text{Eu}^{2+}, 0.05\text{Mn}^{2+}$	(0.2269, 0.2056)	10325	56.1
$\text{Ca}_2\text{PO}_4\text{Cl}:0.07\text{Eu}^{2+}, 0.1\text{Mn}^{2+}$	(0.2512, 0.2316)	6708	57.2
$\text{Ca}_2\text{PO}_4\text{Cl}:0.07\text{Eu}^{2+}, 0.2\text{Mn}^{2+}$	(0.3102, 0.3096)	4296	59.6
$\text{Ca}_2\text{PO}_4\text{Cl}:0.07\text{Eu}^{2+}, 0.3\text{Mn}^{2+}$	(0.3306, 0.3193)	3916	58.5
$\text{Ca}_2\text{PO}_4\text{Cl}:0.07\text{Eu}^{2+}, 0.4\text{Mn}^{2+}$	(0.3519, 0.3199)	3197	55.7
$\text{Ca}_2\text{PO}_4\text{Cl}:0.4\text{Mn}^{2+}$	(0.5869, 0.4016)	1688	13.9