

## *Materials Index*

# MATERIALS INDEX

## B

$\text{BaAl}_2\text{O}_4:\text{Eu}^{2+}$ ,  
 $\text{BaAl}_2\text{S}_4:\text{Eu}^{2+}$ ,  
 $\text{BaB}_8\text{O}_{13}:\text{Eu}^{2+}$ ,  
 $\text{BaF}_2$ ,  
 $\text{BaFBr}:\text{Eu}^{2+}$ ,  
 $\text{BaFCl}:\text{Eu}^{2+}$ ,  
 $\text{BaFCl}:\text{Eu}^{2+}, \text{Pb}^{2+}$ ,  
 $\text{BaGa}_2\text{S}_4:\text{Ce}^{3+}$ ,  
 $\text{BaGa}_2\text{S}_4:\text{Eu}^{2+}$ ,  
 $\text{Ba}_2\text{Li}_2\text{Si}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\text{Ba}_2\text{Li}_2\text{Si}_2\text{O}_7:\text{Sn}^{2+}$ ,  
 $\text{Ba}_2\text{Li}_2\text{Si}_2\text{O}_7:\text{Sn}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{BaMgAl}_{10}\text{O}_{17}:\text{Ce}^{3+}$ ,  
 $\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}$ ,  
 $\text{BaMgAl}_{10}\text{O}_{17}:\text{Eu}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{Ba}_2\text{Mg}_3\text{F}_{10}:\text{Eu}^{2+}$ ,  
 $\text{BaMg}_3\text{F}_8:\text{Eu}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{Ba}_2\text{MgSi}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\text{BaMg}_2\text{Si}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\text{Ba}_5(\text{PO}_4)_3\text{Cl}:\text{Eu}^{2+}$ ,  
 $\text{Ba}_5(\text{PO}_4)_3\text{Cl}:\text{U}$ ,  
 $\text{Ba}_3(\text{PO}_4)_2:\text{Eu}^{2+}$ ,  
 $\text{BaS}:\text{Au}, \text{K}$ ,  
 $\text{BaSO}_4:\text{Ce}^{3+}$ ,  
 $\text{BaSO}_4:\text{Eu}^{2+}$ ,  
 $\text{Ba}_2\text{SiO}_4:\text{Ce}^{3+}$ ,  
 $\text{Ba}_5\text{SiO}_4\text{Cl}_6:\text{Eu}^{2+}$ ,  
 $\text{BaSi}_2\text{O}_5:\text{Eu}^{2+}$ ,  
 $\text{Ba}_2\text{SiO}_4:\text{Eu}^{2+}$ ,  
 $\text{BaSi}_2\text{O}_5:\text{Pb}^{2+}$ ,  
 $\text{Ba}_x\text{Sr}_{1-x}\text{F}_2:\text{Eu}^{2+}$ ,  
 $\text{BaSrMgSi}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\text{BaTiP}_2\text{O}_7$ ,  
 $(\text{Ba}, \text{Ti})_2\text{P}_2\text{O}_7:\text{Ti}$ ,  
 $\text{Ba}_3\text{WO}_6:\text{U}$ ,  
 $\text{BaY}_2\text{F}_8:\text{Er}^{3+}, \text{Yb}^{3+}$ ,  
 $\text{Be}_2\text{SiO}_4:\text{Mn}^{2+}$ ,  
 $\text{Bi}_4\text{Ge}_3\text{O}_{12}$ ,

## C

$\text{CaAl}_2\text{O}_4:\text{Ce}^{3+}$ ,  
 $\text{CaAl}_4\text{O}_7:\text{Ce}^{3+}$ ,  
 $\text{CaAl}_2\text{O}_4:\text{Eu}^{2+}$ ,

$\text{CaAl}_2\text{O}_4:\text{Mn}^{2+}$ ,  
 $\text{CaAl}_4\text{O}_7:\text{Pb}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{CaAl}_2\text{O}_4:\text{Tb}^{3+}$ ,  
 $\text{Ca}_3\text{Al}_2\text{Si}_3\text{O}_{12}:\text{Ce}^{3+}$ ,  
 $\text{Ca}_3\text{Al}_2\text{Si}_3\text{O}_{12}:2\% \text{Ce}^{3+}$ ,  
 $\text{Ca}_3\text{Al}_2\text{Si}_3\text{O}_{12}:\text{Eu}^{2+}$ ,  
 $\text{Ca}_2\text{B}_5\text{O}_9\text{Br}:\text{Eu}^{2+}$ ,  
 $\text{Ca}_2\text{B}_5\text{O}_9\text{Cl}:\text{Eu}^{2+}$ ,  
 $\text{Ca}_2\text{B}_5\text{O}_9\text{Cl}:\text{Pb}^{2+}$ ,  
 $\text{CaB}_2\text{O}_4:\text{Mn}^{2+}$ ,  
 $\text{Ca}_2\text{B}_2\text{O}_5:\text{Mn}^{2+}$ ,  
 $\text{CaB}_2\text{O}_4:\text{Pb}^{2+}$ ,  
 $\text{CaB}_2\text{P}_2\text{O}_9:\text{Eu}^{2+}$ ,  
 $\text{Ca}_5\text{B}_2\text{SiO}_{10}:\text{Eu}^{3+}$ ,  
 $\text{Ca}_{0.5}\text{Ba}_{0.5}\text{Al}_{12}\text{O}_{19}:\text{Ce}^{3+}, \text{Mn}^{2+}$ ,  
 $\text{Ca}_2\text{Ba}_3(\text{PO}_4)_3\text{Cl}:\text{Eu}^{2+}$ ,  
 $\text{CaBr}_2:\text{Eu}^{2+}$  in  $\text{SiO}_2$ ,  
 $\text{CaCl}_2:\text{Eu}^{2+}$  in  $\text{SiO}_2$ ,  
 $\text{CaCl}_2:\text{Eu}^{2+}, \text{Mn}^{2+}$  in  $\text{SiO}_2$ ,  
 $\text{CaF}_2:\text{Ce}^{3+}$ ,  
 $\text{CaF}_2:\text{Ce}^{3+}, \text{Mn}^{2+}$ ,  
 $\text{CaF}_2:\text{Ce}^{3+}, \text{Tb}^{3+}$ ,  
 $\text{CaF}_2:\text{Eu}^{2+}$ ,  
 $\text{CaF}_2:\text{Mn}^{2+}$ ,  
 $\text{CaF}_2:\text{U}$ ,  
 $\text{CaGa}_2\text{O}_4:\text{Mn}^{2+}$ ,  
 $\text{CaGa}_4\text{O}_7:\text{Mn}^{2+}$ ,  
 $\text{CaGa}_2\text{S}_4:\text{Ce}^{3+}$ ,  
 $\text{CaGa}_2\text{S}_4:\text{Eu}^{2+}$ ,  
 $\text{CaGa}_2\text{S}_4:\text{Mn}^{2+}$ ,  
 $\text{CaGa}_2\text{S}_4:\text{Pb}^{2+}$ ,  
 $\text{CaGeO}_3:\text{Mn}^{2+}$ ,  
 $\text{CaI}_2:\text{Eu}^{2+}$  in  $\text{SiO}_2$ ,  
 $\text{CaI}_2:\text{Eu}^{2+}, \text{Mn}^{2+}$  in  $\text{SiO}_2$ ,  
 $\text{CaLaBO}_4:\text{Eu}^{3+}$ ,  
 $\text{CaLaB}_3\text{O}_7:\text{Ce}^{3+}, \text{Mn}^{2+}$ ,  
 $\text{Ca}_2\text{La}_2\text{BO}_{6.5}:\text{Pb}^{2+}$ ,  
 $\text{Ca}_2\text{MgSi}_2\text{O}_7$ ,  
 $\text{Ca}_2\text{MgSi}_2\text{O}_7:\text{Ce}^{3+}$ ,  
 $\text{CaMgSi}_2\text{O}_6:\text{Eu}^{2+}$ ,  
 $\text{Ca}_3\text{MgSi}_2\text{O}_8:\text{Eu}^{2+}$ ,  
 $\text{Ca}_2\text{MgSi}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\text{CaMgSi}_2\text{O}_6:\text{Eu}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{Ca}_2\text{MgSi}_2\text{O}_7:\text{Eu}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{CaMoO}_4$ ,

$\text{CaMoO}_4\text{:Eu}^{3+}$ ,  
 $\text{CaO:Bi}^{3+}$ ,  
 $\text{CaO:Cd}^{2+}$ ,  
 $\text{CaO:Cu}^+$ ,  
 $\text{CaO:Eu}^{3+}$ ,  
 $\text{CaO:Eu}^{3+},\text{Na}^+$ ,  
 $\text{CaO:Mn}^{2+}$ ,  
 $\text{CaO:Pb}^{2+}$ ,  
 $\text{CaO:Sb}^{3+}$ ,  
 $\text{CaO:Sm}^{3+}$ ,  
 $\text{CaO:Tb}^{3+}$ ,  
 $\text{CaO:Tl}^+$ ,  
 $\text{CaO:Zn}^{2+}$ ,  
 $\text{Ca}_2\text{P}_2\text{O}_7\text{:Ce}^{3+}$ ,  
 $\alpha\text{-Ca}_3(\text{PO}_4)_2\text{:Ce}^{3+}$ ,  
 $\beta\text{-Ca}_3(\text{PO}_4)_2\text{:Ce}^{3+}$ ,  
 $\text{Ca}_5(\text{PO}_4)_3\text{Cl:Eu}^{2+}$ ,  
 $\text{Ca}_5(\text{PO}_4)_3\text{Cl:Mn}^{2+}$ ,  
 $\text{Ca}_5(\text{PO}_4)_3\text{Cl:Sb}^{3+}$ ,  
 $\text{Ca}_5(\text{PO}_4)_3\text{Cl:Sn}^{2+}$ ,  
 $\beta\text{-Ca}_3(\text{PO}_4)_2\text{:Eu}^{2+},\text{Mn}^{2+}$ ,  
 $\text{Ca}_5(\text{PO}_4)_3\text{F:Mn}^{2+}$ ,  
 $\text{Ca}_5(\text{PO}_4)_3\text{F:Sb}^{3+}$ ,  
 $\text{Ca}_5(\text{PO}_4)_3\text{F:Sn}^{2+}$ ,  
 $\alpha\text{-Ca}_3(\text{PO}_4)_2\text{:Eu}^{2+}$ ,  
 $\beta\text{-Ca}_3(\text{PO}_4)_2\text{:Eu}^{2+}$ ,  
 $\text{Ca}_2\text{P}_2\text{O}_7\text{:Eu}^{2+}$ ,  
 $\text{Ca}_2\text{P}_2\text{O}_7\text{:Eu}^{2+},\text{Mn}^{2+}$ ,  
 $\text{CaP}_2\text{O}_6\text{:Mn}^{2+}$ ,  
 $\alpha\text{-Ca}_3(\text{PO}_4)_2\text{:Pb}^{2+}$ ,  
 $\alpha\text{-Ca}_3(\text{PO}_4)_2\text{:Sn}^{2+}$ ,  
 $\beta\text{-Ca}_3(\text{PO}_4)_2\text{:Sn}^{2+}$ ,  
 $\beta\text{-Ca}_2\text{P}_2\text{O}_7\text{:Sn,Mn}$ ,  
 $\alpha\text{-Ca}_3(\text{PO}_4)_2\text{:Tl}^+$ ,  
 $\text{CaS:Bi}^{3+}$ ,  
 $\text{CaS:Bi}^{3+},\text{Na}$ ,  
 $\text{CaS:Ce}^{3+}$ ,  
 $\text{CaS:Eu}^{2+}$ ,  
 $\text{CaS:Cu}^+,\text{Na}^+$ ,  
 $\text{CaS:La}^{3+}$ ,  
 $\text{CaS:Mn}^{2+}$ ,  
 $\text{CaSO}_4\text{:Bi}$ ,  
 $\text{CaSO}_4\text{:Ce}^{3+}$ ,  
 $\text{CaSO}_4\text{:Ce}^{3+},\text{Mn}^{2+}$ ,  
 $\text{CaSO}_4\text{:Eu}^{2+}$ ,  
 $\text{CaSO}_4\text{:Eu}^{2+},\text{Mn}^{2+}$ ,  
 $\text{CaSO}_4\text{:Pb}^{2+}$ ,

$\text{CaS:Pb}^{2+}$ ,  
 $\text{CaS:Pb}^{2+},\text{Cl}$ ,  
 $\text{CaS:Pb}^{2+},\text{Mn}^{2+}$ ,  
 $\text{CaS:Pr}^{3+},\text{Pb}^{2+},\text{Cl}$ ,  
 $\text{CaS:Sb}^{3+}$ ,  
 $\text{CaS:Sb}^{3+},\text{Na}$ ,  
 $\text{CaS:Sm}^{3+}$ ,  
 $\text{CaS:Sn}^{2+}$ ,  
 $\text{CaS:Sn}^{2+},\text{F}$ ,  
 $\text{CaS:Tb}^{3+}$ ,  
 $\text{CaS:Tb}^{3+},\text{Cl}$ ,  
 $\text{CaS:Y}^{3+}$ ,  
 $\text{CaS:Yb}^{2+}$ ,  
 $\text{CaS:Yb}^{2+},\text{Cl}$ ,  
 $\text{CaSiO}_3\text{:Ce}^{3+}$ ,  
 $\text{Ca}_3\text{SiO}_4\text{Cl}_2\text{:Eu}^{2+}$ ,  
 $\text{Ca}_3\text{SiO}_4\text{Cl}_2\text{:Pb}^{2+}$ ,  
 $\text{CaSiO}_3\text{:Eu}^{2+}$ ,  
 $\text{CaSiO}_3\text{:Mn}^{2+},\text{Pb}$ ,  
 $\text{CaSiO}_3\text{:Pb}^{2+}$ ,  
 $\text{CaSiO}_3\text{:Pb}^{2+},\text{Mn}^{2+}$ ,  
 $\text{CaSiO}_3\text{:Ti}^{4+}$ ,  
 $\text{CaSr}_2(\text{PO}_4)_2\text{:Bi}^{3+}$ ,  
 $\beta\text{-(Ca,Sr)}_3(\text{PO}_4)_2\text{:Sn}^{2+},\text{Mn}^{2+}$ ,  
 $\text{CaTi}_{0.9}\text{Al}_{0.1}\text{O}_3\text{:Bi}^{3+}$ ,  
 $\text{CaTiO}_3\text{:Eu}^{3+}$ ,  
 $\text{CaTiO}_3\text{:Pr}^{3+}$ ,  
 $\text{Ca}_5(\text{VO}_4)_3\text{Cl}$ ,  
 $\text{CaWO}_4$ ,  
 $\text{CaWO}_4\text{:Pb}^{2+}$ ,  
 $\text{CaWO}_4\text{:W}$ ,  
 $\text{Ca}_3\text{WO}_6\text{:U}$ ,  
 $\text{CaYAlO}_4\text{:Eu}^{3+}$ ,  
 $\text{CaYBO}_4\text{:Bi}^{3+}$ ,  
 $\text{CaYBO}_4\text{:Eu}^{3+}$ ,  
 $\text{CaYB}_{0.8}\text{O}_{3.7}\text{:Eu}^{3+}$ ,  
 $\text{CaY}_2\text{ZrO}_6\text{:Eu}^{3+}$ ,  
 $(\text{Ca,Zn,Mg})_3(\text{PO}_4)_2\text{:Sn}$ ,  
 $\text{CeF}_3$ ,  
 $(\text{CeMg})\text{BaAl}_{11}\text{O}_{18}\text{:Ce}$ ,  
 $(\text{CeMg})\text{SrAl}_{11}\text{O}_{18}\text{:Ce}$ ,  
 $(\text{Ce,Tb})\text{MgAl}_{11}\text{O}_{19}\text{:Ce:Tb}$ ,  
 $\text{Cd}_2\text{B}_6\text{O}_{11}\text{:Mn}^{2+}$ ,  
 $\text{CdS:Ag}^+,\text{Cl}^-$ ,  
 $\text{CdS:In}$ ,  
 $\text{CdS:In, Ultrafast}$ ,  
 $\text{CdS:In,Te}$ ,

CdS:Te,  
CdWO<sub>4</sub>,  
CsF,  
CsI  
CsI:Na<sup>+</sup>,  
CsI:Tl,

## E

(ErCl<sub>3</sub>)<sub>0.25</sub>(BaCl<sub>2</sub>)<sub>0.75</sub>,

## G

GaN:Zn,  
Gd<sub>3</sub>Ga<sub>5</sub>O<sub>12</sub>:Cr<sup>3+</sup>,  
Gd<sub>3</sub>Ga<sub>5</sub>O<sub>12</sub>:Cr,Ce,  
GdNbO<sub>4</sub>:Bi<sup>3+</sup>,  
Gd<sub>2</sub>O<sub>2</sub>S:Eu<sup>3+</sup>,  
Gd<sub>2</sub>O<sub>2</sub>S:Pr<sup>3+</sup>,  
Gd<sub>2</sub>O<sub>2</sub>S:Pr,Ce,F,  
Gd<sub>2</sub>O<sub>2</sub>S:Tb<sup>3+</sup>,  
Gd<sub>2</sub>SiO<sub>5</sub>:Ce<sup>3+</sup>,

## K

KAl<sub>11</sub>O<sub>17</sub>:Ti<sup>+</sup>,  
KGa<sub>11</sub>O<sub>17</sub>:Mn<sup>2+</sup>,  
K<sub>2</sub>La<sub>2</sub>Ti<sub>3</sub>O<sub>10</sub>:Eu,  
KMgF<sub>3</sub>:Eu<sup>2+</sup>,  
KMgF<sub>3</sub>:Mn<sup>2+</sup>,  
K<sub>2</sub>SiF<sub>6</sub>:Mn<sup>4+</sup>,

## L

LaAl<sub>3</sub>B<sub>4</sub>O<sub>12</sub>:Eu<sup>3+</sup>,  
LaAlB<sub>2</sub>O<sub>6</sub>:Eu<sup>3+</sup>,  
LaAlO<sub>3</sub>:Eu<sup>3+</sup>,  
LaAlO<sub>3</sub>:Sm<sup>3+</sup>,  
LaAsO<sub>4</sub>:Eu<sup>3+</sup>,  
LaBr<sub>3</sub>:Ce<sup>3+</sup>,  
LaBO<sub>3</sub>:Eu<sup>3+</sup>,  
(La,Ce,Tb)PO<sub>4</sub>:Ce:Tb,  
LaCl<sub>3</sub>:Ce<sup>3+</sup>,  
La<sub>2</sub>O<sub>3</sub>:Bi<sup>3+</sup>,  
LaOBr:Tb<sup>3+</sup>,  
LaOBr:Tm<sup>3+</sup>,  
LaOCl:Bi<sup>3+</sup>,  
LaOCl:Eu<sup>3+</sup>,  
LaOF:Eu<sup>3+</sup>,  
La<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup>,

La<sub>2</sub>O<sub>3</sub>:Pb<sup>2+</sup>,  
La<sub>2</sub>O<sub>2</sub>S:Tb<sup>3+</sup>,  
LaPO<sub>4</sub>:Ce<sup>3+</sup>,  
LaPO<sub>4</sub>:Eu<sup>3+</sup>,  
LaSiO<sub>3</sub>Cl:Ce<sup>3+</sup>,  
LaSiO<sub>3</sub>Cl:Ce<sup>3+</sup>,Tb<sup>3+</sup>,  
LaVO<sub>4</sub>:Eu<sup>3+</sup>,  
La<sub>2</sub>W<sub>3</sub>O<sub>12</sub>:Eu<sup>3+</sup>,  
LiAlF<sub>4</sub>:Mn<sup>2+</sup>,  
LiAl<sub>5</sub>O<sub>8</sub>:Fe<sup>3+</sup>,  
LiAlO<sub>2</sub>:Fe<sup>3+</sup>,  
LiAlO<sub>2</sub>:Mn<sup>2+</sup>,  
LiAl<sub>5</sub>O<sub>8</sub>:Mn<sup>2+</sup>,  
Li<sub>2</sub>CaP<sub>2</sub>O<sub>7</sub>:Ce<sup>3+</sup>,Mn<sup>2+</sup>,  
LiCeBa<sub>4</sub>Si<sub>4</sub>O<sub>14</sub>:Mn<sup>2+</sup>,  
LiCeSrBa<sub>3</sub>Si<sub>4</sub>O<sub>14</sub>:Mn<sup>2+</sup>,  
LiInO<sub>2</sub>:Eu<sup>3+</sup>,  
LiInO<sub>2</sub>:Sm<sup>3+</sup>,  
LiLaO<sub>2</sub>:Eu<sup>3+</sup>,  
LuAlO<sub>3</sub>:Ce<sup>3+</sup>,  
(Lu,Gd)<sub>2</sub>SiO<sub>5</sub>:Ce<sup>3+</sup>,  
Lu<sub>2</sub>SiO<sub>5</sub>:Ce<sup>3+</sup>,  
Lu<sub>2</sub>Si<sub>2</sub>O<sub>7</sub>:Ce<sup>3+</sup>,  
LuTaO<sub>4</sub>:Nb<sup>5+</sup>,  
Lu<sub>1-x</sub>Y<sub>x</sub>AlO<sub>3</sub>:Ce<sup>3+</sup>,

## M

MgAl<sub>2</sub>O<sub>4</sub>:Mn<sup>2+</sup>,  
MgSrAl<sub>10</sub>O<sub>17</sub>:Ce,  
MgB<sub>2</sub>O<sub>4</sub>:Mn<sup>2+</sup>,  
MgBa<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>:Sn<sup>2+</sup>,  
MgBa<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>:U,  
MgBaP<sub>2</sub>O<sub>7</sub>:Eu<sup>2+</sup>,  
MgBaP<sub>2</sub>O<sub>7</sub>:Eu<sup>2+</sup>,Mn<sup>2+</sup>,  
MgBa<sub>3</sub>Si<sub>2</sub>O<sub>8</sub>:Eu<sup>2+</sup>,  
MgBa(SO<sub>4</sub>)<sub>2</sub>:Eu<sup>2+</sup>,  
Mg<sub>3</sub>Ca<sub>3</sub>(PO<sub>4</sub>)<sub>4</sub>:Eu<sup>2+</sup>,  
MgCaP<sub>2</sub>O<sub>7</sub>:Mn<sup>2+</sup>,  
Mg<sub>2</sub>Ca(SO<sub>4</sub>)<sub>3</sub>:Eu<sup>2+</sup>,  
Mg<sub>2</sub>Ca(SO<sub>4</sub>)<sub>3</sub>:Eu<sup>2+</sup>,Mn<sup>2+</sup>,  
MgCeAl<sub>11</sub>O<sub>19</sub>:Tb<sup>3+</sup>,  
Mg<sub>4</sub>(F)GeO<sub>6</sub>:Mn<sup>2+</sup>,  
Mg<sub>4</sub>(F)(Ge,Sn)O<sub>6</sub>:Mn<sup>2+</sup>,  
MgF<sub>2</sub>:Mn<sup>2+</sup>,  
MgGa<sub>2</sub>O<sub>4</sub>:Mn<sup>2+</sup>,  
Mg<sub>8</sub>Ge<sub>2</sub>O<sub>11</sub>F<sub>2</sub>:Mn<sup>4+</sup>,  
MgS:Eu<sup>2+</sup>,

$\text{MgSiO}_3:\text{Mn}^{2+}$ ,  
 $\text{Mg}_2\text{SiO}_4:\text{Mn}^{2+}$ ,  
 $\text{Mg}_3\text{SiO}_3\text{F}_4:\text{Ti}^{4+}$ ,  
 $\text{MgSO}_4:\text{Eu}^{2+}$ ,  
 $\text{MgSO}_4:\text{Pb}^{2+}$ ,  
 $\text{MgSrBa}_2\text{Si}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\text{MgSrP}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\text{MgSr}_5(\text{PO}_4)_4:\text{Sn}^{2+}$ ,  
 $\text{MgSr}_3\text{Si}_2\text{O}_8:\text{Eu}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{Mg}_2\text{Sr}(\text{SO}_4)_3:\text{Eu}^{2+}$ ,  
 $\text{Mg}_2\text{TiO}_4:\text{Mn}^{4+}$ ,  
 $\text{MgWO}_4$ ,  
 $\text{MgYBO}_4:\text{Eu}^{3+}$ ,  
 $\text{MSL}$ ,

## N

$\text{Na}_3\text{Ce}(\text{PO}_4)_2:\text{Tb}^{3+}$ ,  
 $\text{NaI}:\text{Tl}$ ,  
 $\text{Na}_{1.23}\text{K}_{0.42}\text{Eu}_{0.12}\text{TiSi}_4\text{O}_{11}:\text{Eu}^{3+}$ ,  
 $\text{Na}_{1.23}\text{K}_{0.42}\text{Eu}_{0.12}\text{TiSi}_5\text{O}_{13}\cdot x\text{H}_2\text{O}:\text{Eu}^{3+}$ ,  
 $\text{Na}_{1.29}\text{K}_{0.46}\text{Er}_{0.08}\text{TiSi}_4\text{O}_{11}:\text{Eu}^{3+}$ ,  
 $\text{Na}_2\text{Mg}_3\text{Al}_2\text{Si}_2\text{O}_{10}:\text{Tb}$ ,  
 $\text{Na}(\text{Mg}_{2-x}\text{Mn}_x)\text{LiSi}_4\text{O}_{10}\text{F}_2:\text{Mn}$ ,  
 $\text{NaYF}_4:\text{Er}^{3+}, \text{Yb}^{3+}$ ,  
 $\text{NaYO}_2:\text{Eu}^{3+}$ ,

## P

$\text{P46 (70\%)} + \text{P47 (30\%)}$ ,

## S

$\text{SrAl}_{12}\text{O}_{19}:\text{Ce}^{3+}, \text{Mn}^{2+}$ ,  
 $\text{SrAl}_2\text{O}_4:\text{Eu}^{2+}$ ,  
 $\text{SrAl}_4\text{O}_7:\text{Eu}^{3+}$ ,  
 $\text{SrAl}_{12}\text{O}_{19}:\text{Eu}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{SrAl}_2\text{S}_4:\text{Eu}^{2+}$ ,  
 $\text{Sr}_2\text{B}_5\text{O}_9\text{Cl}:\text{Eu}^{2+}$ ,  
 $\text{SrB}_4\text{O}_7:\text{Eu}^{2+}(\text{F}, \text{Cl}, \text{Br})$ ,  
 $\text{SrB}_4\text{O}_7:\text{Pb}^{2+}$ ,  
 $\text{SrB}_4\text{O}_7:\text{Pb}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{SrB}_8\text{O}_{13}:\text{Sm}^{2+}$ ,  
 $\text{Sr}_x\text{Ba}_y\text{Cl}_z\text{Al}_2\text{O}_{4-z/2}:\text{Mn}^{2+}, \text{Ce}^{3+}$ ,  
 $\text{SrBaSiO}_4:\text{Eu}^{2+}$ ,  
 $\text{Sr}(\text{Cl}, \text{Br}, \text{I})_2:\text{Eu}^{2+}$  in  $\text{SiO}_2$ ,  
 $\text{SrCl}_2:\text{Eu}^{2+}$  in  $\text{SiO}_2$ ,  
 $\text{Sr}_5\text{Cl}(\text{PO}_4)_3:\text{Eu}$ ,  
 $\text{Sr}_w\text{F}_x\text{B}_4\text{O}_{6.5}:\text{Eu}^{2+}$ ,  
 $\text{Sr}_w\text{F}_x\text{B}_y\text{O}_z:\text{Eu}^{2+}, \text{Sm}^{2+}$ ,

$\text{SrF}_2:\text{Eu}^{2+}$ ,  
 $\text{SrGa}_{12}\text{O}_{19}:\text{Mn}^{2+}$ ,  
 $\text{SrGa}_2\text{S}_4:\text{Ce}^{3+}$ ,  
 $\text{SrGa}_2\text{S}_4:\text{Eu}^{2+}$ ,  
 $\text{SrGa}_2\text{S}_4:\text{Pb}^{2+}$ ,  
 $\text{SrIn}_2\text{O}_4:\text{Pr}^{3+}, \text{Al}^{3+}$ ,  
 $(\text{Sr}, \text{Mg})_3(\text{PO}_4)_2:\text{Sn}$ ,  
 $\text{SrMgSi}_2\text{O}_6:\text{Eu}^{2+}$ ,  
 $\text{Sr}_2\text{MgSi}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\text{Sr}_3\text{MgSi}_2\text{O}_8:\text{Eu}^{2+}$ ,  
 $\text{SrMoO}_4:\text{U}$ ,  
 $\text{SrO}\cdot 3\text{B}_2\text{O}_3:\text{Eu}^{2+}, \text{Cl}$ ,  
 $\beta\text{-SrO}\cdot 3\text{B}_2\text{O}_3:\text{Pb}^{2+}$ ,  
 $\beta\text{-SrO}\cdot 3\text{B}_2\text{O}_3:\text{Pb}^{2+}, \text{Mn}^{2+}$ ,  
 $\alpha\text{-SrO}\cdot 3\text{B}_2\text{O}_3:\text{Sm}^{2+}$ ,  
 $\text{Sr}_6\text{P}_5\text{BO}_{20}:\text{Eu}$ ,  
 $\text{Sr}_5(\text{PO}_4)_3\text{Cl}:\text{Eu}^{2+}$ ,  
 $\text{Sr}_5(\text{PO}_4)_3\text{Cl}:\text{Eu}^{2+}, \text{Pr}^{3+}$ ,  
 $\text{Sr}_5(\text{PO}_4)_3\text{Cl}:\text{Mn}^{2+}$ ,  
 $\text{Sr}_5(\text{PO}_4)_3\text{Cl}:\text{Sb}^{3+}$ ,  
 $\text{Sr}_2\text{P}_2\text{O}_7:\text{Eu}^{2+}$ ,  
 $\beta\text{-Sr}_3(\text{PO}_4)_2:\text{Eu}^{2+}$ ,  
 $\text{Sr}_5(\text{PO}_4)_3\text{F}:\text{Mn}^{2+}$ ,  
 $\text{Sr}_5(\text{PO}_4)_3\text{F}:\text{Sb}^{3+}$ ,  
 $\text{Sr}_5(\text{PO}_4)_3\text{F}:\text{Sb}^{3+}, \text{Mn}^{2+}$ ,  
 $\text{Sr}_5(\text{PO}_4)_3\text{F}:\text{Sn}^{2+}$ ,  
 $\text{Sr}_2\text{P}_2\text{O}_7:\text{Sn}^{2+}$ ,  
 $\beta\text{-Sr}_3(\text{PO}_4)_2:\text{Sn}^{2+}$ ,  
 $\beta\text{-Sr}_3(\text{PO}_4)_2:\text{Sn}^{2+}, \text{Mn}^{2+}(\text{Al})$ ,  
 $\text{SrS}:\text{Ce}^{3+}$ ,  
 $\text{SrS}:\text{Eu}^{2+}$ ,  
 $\text{SrS}:\text{Mn}^{2+}$ ,  
 $\text{SrS}:\text{Cu}^+, \text{Na}$ ,  
 $\text{SrSO}_4:\text{Bi}$ ,  
 $\text{SrSO}_4:\text{Ce}^{3+}$ ,  
 $\text{SrSO}_4:\text{Eu}^{2+}$ ,  
 $\text{SrSO}_4:\text{Eu}^{2+}, \text{Mn}^{2+}$ ,  
 $\text{Sr}_5\text{Si}_4\text{O}_{10}\text{Cl}_6:\text{Eu}^{2+}$ ,  
 $\text{Sr}_2\text{SiO}_4:\text{Eu}^{2+}$ ,  
 $\text{SrTiO}_3:\text{Pr}^{3+}$ ,  
 $\text{SrTiO}_3:\text{Pr}^{3+}, \text{Al}^{3+}$ ,  
 $\text{Sr}_3\text{WO}_6:\text{U}$ ,  
 $\text{SrY}_2\text{O}_3:\text{Eu}^{3+}$ ,

## T

$\text{ThO}_2:\text{Eu}^{3+}$ ,  
 $\text{ThO}_2:\text{Pr}^{3+}$ ,  
 $\text{ThO}_2:\text{Tb}^{3+}$ ,

## Y

YAl<sub>3</sub>B<sub>4</sub>O<sub>12</sub>:Bi<sup>3+</sup>,  
 YAl<sub>3</sub>B<sub>4</sub>O<sub>12</sub>:Ce<sup>3+</sup>,  
 YAl<sub>3</sub>B<sub>4</sub>O<sub>12</sub>:Ce<sup>3+</sup>,Mn<sup>2+</sup>,  
 YAl<sub>3</sub>B<sub>4</sub>O<sub>12</sub>:Ce<sup>3+</sup>,Tb<sup>3+</sup>,  
 YAl<sub>3</sub>B<sub>4</sub>O<sub>12</sub>:Eu<sup>3+</sup>,  
 YAl<sub>3</sub>B<sub>4</sub>O<sub>12</sub>:Eu<sup>3+</sup>,Cr<sup>3+</sup>,  
 YAl<sub>3</sub>B<sub>4</sub>O<sub>12</sub>:Th<sup>4+</sup>,Ce<sup>3+</sup>,Mn<sup>2+</sup>,  
 YAlO<sub>3</sub>:Ce<sup>3+</sup>,  
 Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>:Ce<sup>3+</sup>,

Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>:Cr<sup>3+</sup>,  
 YAlO<sub>3</sub>:Eu<sup>3+</sup>,  
 Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>:Eu<sup>3+</sup>,  
 Y<sub>4</sub>Al<sub>2</sub>O<sub>9</sub>:Eu<sup>3+</sup>,  
 Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>:Mn<sup>4+</sup>,  
 YAlO<sub>3</sub>:Sm<sup>3+</sup>,  
 YAlO<sub>3</sub>:Tb<sup>3+</sup>,  
 Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>:Tb<sup>3+</sup>,  
 YAsO<sub>4</sub>:Eu<sup>3+</sup>,  
 YBO<sub>3</sub>:Ce<sup>3+</sup>,  
 YBO<sub>3</sub>:Eu<sup>3+</sup>,  
 YF<sub>3</sub>:Er<sup>3+</sup>,Yb<sup>3+</sup>,  
 YF<sub>3</sub>:Mn<sup>2+</sup>,  
 YF<sub>3</sub>:Mn<sup>2+</sup>,Th<sup>4+</sup>,  
 YF<sub>3</sub>:Tm<sup>3+</sup>,Yb<sup>3+</sup>,  
 (Y,Gd)BO<sub>3</sub>:Eu,  
 (Y,Gd)BO<sub>3</sub>:Tb,  
 (Y,Gd)<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup>,  
 Y<sub>1.34</sub>Gd<sub>0.60</sub>O<sub>3</sub>(Eu,Pr)<sub>0.06</sub>,  
 Y<sub>2</sub>O<sub>3</sub>:Bi<sup>3+</sup>,  
 YOBr:Eu<sup>3+</sup>,  
 Y<sub>2</sub>O<sub>3</sub>:Ce,  
 Y<sub>2</sub>O<sub>3</sub>:Er<sup>3+</sup>,  
 Y<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup> (YOE),  
 Y<sub>2</sub>O<sub>3</sub>:Ce<sup>3+</sup>,Tb<sup>3+</sup>,  
 YOCl:Ce<sup>3+</sup>,  
 YOCl:Eu<sup>3+</sup>,  
 YOF:Eu<sup>3+</sup>,  
 YOF:Tb<sup>3+</sup>,  
 Y<sub>2</sub>O<sub>3</sub>:Ho<sup>3+</sup>,  
 Y<sub>2</sub>O<sub>2</sub>S:Eu<sup>3+</sup>,  
 Y<sub>2</sub>O<sub>2</sub>S:Pr<sup>3+</sup>,  
 Y<sub>2</sub>O<sub>2</sub>S:Tb<sup>3+</sup>,  
 Y<sub>2</sub>O<sub>3</sub>:Tb<sup>3+</sup>,  
 YPO<sub>4</sub>:Ce<sup>3+</sup>,  
 YPO<sub>4</sub>:Ce<sup>3+</sup>,Tb<sup>3+</sup>,

YPO<sub>4</sub>:Eu<sup>3+</sup>,  
 YPO<sub>4</sub>:Mn<sup>2+</sup>,Th<sup>4+</sup>,  
 YPO<sub>4</sub>:V<sup>5+</sup>,  
 Y(P,V)O<sub>4</sub>:Eu,  
 Y<sub>2</sub>SiO<sub>5</sub>:Ce<sup>3+</sup>,  
 YTaO<sub>4</sub>,  
 YTaO<sub>4</sub>:Nb<sup>5+</sup>,  
 YVO<sub>4</sub>:Dy<sup>3+</sup>,  
 YVO<sub>4</sub>:Eu<sup>3+</sup>,

## Z

ZnAl<sub>2</sub>O<sub>4</sub>:Mn<sup>2+</sup>,  
 ZnB<sub>2</sub>O<sub>4</sub>:Mn<sup>2+</sup>,  
 ZnBa<sub>2</sub>S<sub>3</sub>:Mn<sup>2+</sup>,  
 (Zn+Be)<sub>2</sub>SiO<sub>4</sub>:Mn<sup>2+</sup>,  
 Zn<sub>0.4</sub>Cd<sub>0.6</sub>S:Ag,  
 Zn<sub>0.6</sub>Cd<sub>0.4</sub>S:Ag,  
 (Zn,Cd)S:Ag,Cl,  
 (Zn,Cd)S:Cu,  
 ZnF<sub>2</sub>:Mn<sup>2+</sup>,  
 ZnGa<sub>2</sub>O<sub>4</sub>,  
 ZnGa<sub>2</sub>O<sub>4</sub>:Mn<sup>2+</sup>,  
 ZnGa<sub>2</sub>S<sub>4</sub>:Mn<sup>2+</sup>,  
 Zn<sub>2</sub>GeO<sub>4</sub>:Mn<sup>2+</sup>,  
 (Zn,Mg)F<sub>2</sub>:Mn<sup>2+</sup>,  
 ZnMg<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>:Mn<sup>2+</sup>,  
 (Zn,Mg)<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>:Mn<sup>2+</sup>,  
 ZnO:Al<sup>3+</sup>,Ga<sup>3+</sup>,  
 ZnO:Bi<sup>3+</sup>,  
 ZnO:Ga<sup>3+</sup>,  
 ZnO:Ga, Ultrafast,  
 ZnO-CdO:Ga, Ultrafast,  
 ZnO:S,  
 ZnO:Se,  
 ZnO:Zn,  
 ZnS:Ag<sup>+</sup>,Cl<sup>-</sup>,  
 ZnS:Ag,Cu,Cl,  
 ZnS:Ag,Ni,  
 ZnS:Au,In,  
 ZnS-CdS (25-75),  
 ZnS-CdS (50-50),  
 ZnS-CdS (75-25),  
 ZnS-CdS:Ag,Br,Ni,  
 ZnS-CdS:Ag<sup>+</sup>,Cl,  
 ZnS-CdS:Cu,Br high brightness,  
 ZnS-CdS:Cu,Br long life,  
 ZnS-CdS:Cu,I,

ZnS:Cl<sup>-</sup>,  
ZnS:Eu<sup>2+</sup>,  
ZnS:Cu,  
ZnS:Cu<sup>+</sup>,Al<sup>3+</sup>,  
ZnS:Cu<sup>+</sup>,Cl<sup>-</sup>,  
ZnS:Cu,Sn,  
ZnS:Eu<sup>2+</sup>,  
ZnS:Mn<sup>2+</sup>,  
ZnS:Mn,Cu,  
ZnS:Mn<sup>2+</sup>,Te<sup>2+</sup>,  
ZnS:P,  
ZnS:P<sup>3-</sup>,Cl<sup>-</sup>,  
ZnS:Pb<sup>2+</sup>,  
ZnS:Pb<sup>2+</sup>,Cl<sup>-</sup>,  
ZnS:Pb,Cu,

Zn<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>:Mn<sup>2+</sup>,  
Zn<sub>2</sub>SiO<sub>4</sub>:Mn<sup>2+</sup>,  
Zn<sub>2</sub>SiO<sub>4</sub>:Mn<sup>2+</sup>,As<sup>5+</sup>,  
Zn<sub>2</sub>SiO<sub>4</sub>:Mn;Sb<sub>2</sub>O<sub>3</sub>,  
Zn<sub>2</sub>SiO<sub>4</sub>:Mn<sup>2+</sup>,P,  
Zn<sub>2</sub>SiO<sub>4</sub>:Ti<sup>4+</sup>,  
ZnS:Sn<sup>2+</sup>,  
ZnS:Sn,Ag,  
ZnS:Sn<sup>2+</sup>,Li<sup>+</sup>,  
ZnS:Te,Mn,  
ZnS-ZnTe:Mn<sup>2+</sup>,  
ZnSe:Cu<sup>+</sup>,Cl,  
ZnWO<sub>4</sub>,