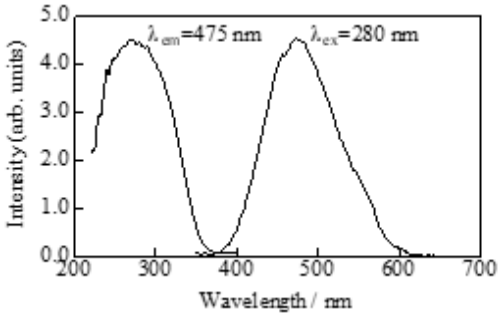
本研究室のオリジナル蛍光体

ZrO_2 + 1000 ppm Ti + 4000 ppm P 粉末

吸収率：53%、内部量子収率：59%、外部量子収率：31%

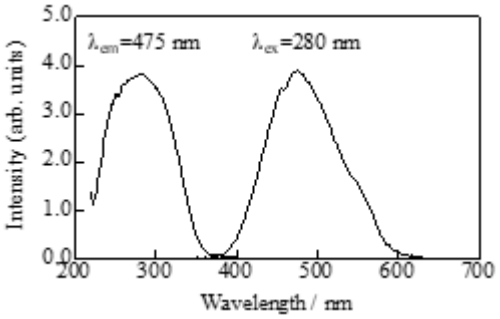


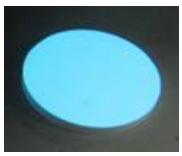
（254 nm 照射下）

Fluorescence property of ZrO_2:Ti phosphor and its enhancement in fluorescent intensity by adding phosphorus
Journal of Materials Research and Technology, **5**, 289-292 (2016).
http://dx.doi.org/10.1016/j.jmrt.2016.03.005 ＜オープンアクセス誌＞

{ ZrO_2 + 1000 ppm Ti + 4000 ppm P }／50wt%Al_2O_3 焼結体

内部量子収率：57%



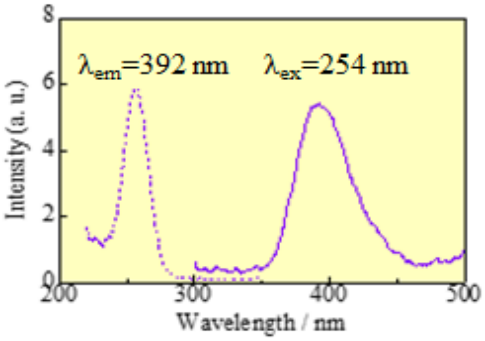


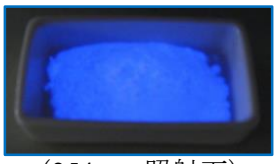
（254 nm 照射下）

Synthesis of blue fluorescent ZrO_2:Ti,P/Al_2O_3 composite sintered bodies
Journal of the Ceramic Society of Japan, **124**, 950-953 (2016).
http://dx.doi.org/10.2109/jcersj2.16128 ＜オープンアクセス誌＞

$H_{0.80}Zr_2P_{3.22}O_{11.90}$ 粉末

吸収率：43%、内部量子収率：41%、外部量子収率：18%



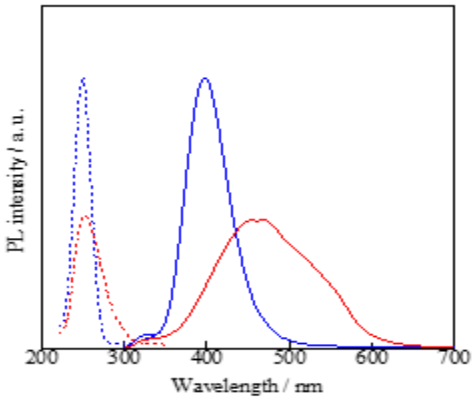


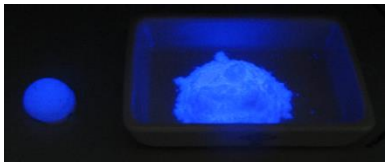
（254 nm 照射下）

Preparation and luminescence of a new violet blue phosphor derived from proton-type zirconium phosphate
Journal of Materials Research and Technology, **6**, 297-301 (2017).
http://dx.doi.org/10.1016/j.jmrt.2017.03.001 ＜オープンアクセス誌＞

$(GeO_2)_{20}(SiO_2)_{80}$ + 1000 ppm Al ガラス

λem=399 nm、λex=249 nm　　内部量子収率：70%



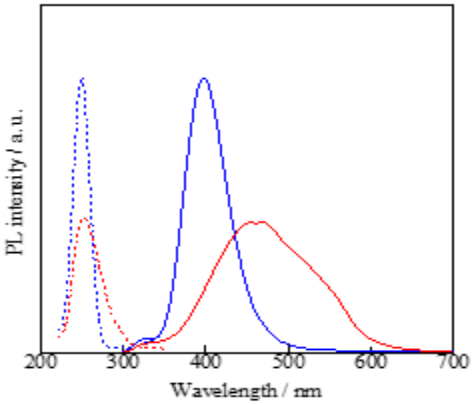


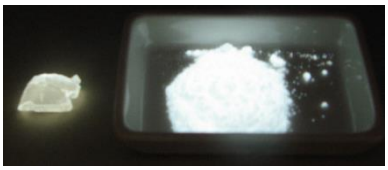
（254 nm 照射下）

Effect of various additives on fluorescent intensity of GeO_2·SiO_2 phosphor
Optik, **142**, 54-60 (2017).
http://dx.doi.org/10.1016/j.ijleo.2017.05.085

$(SiO_2)_{50}(GeO_2)_{20}(Na_2O)_{30}$ ガラス

λem=452 nm、λex=252 nm　　内部量子収率：37%



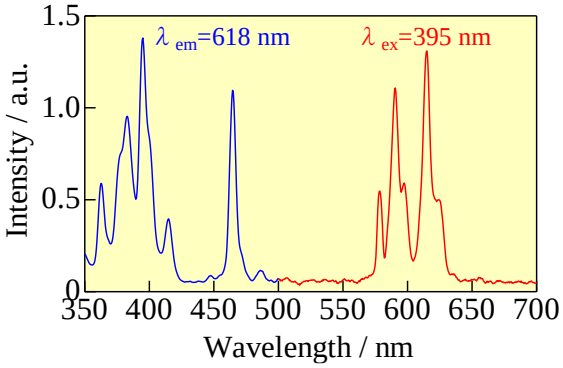


（254 nm 照射下）

Photoluminescence of sodium germanosilicate glass synthesized by melting mixture of SiO_2, GeO_2, and Na_2CO_3
Optik, **149**, 423-429 (2017).
http://dx.doi.org/10.1016/j.ijleo.2017.09.059

$Sr_3(La_{6.2}Eu_{0.8})(SiO_4)_6O_{1.5}$

吸収率：34%、内部量子収率：80%、外部量子収率：27%



（365 nm 照射下）

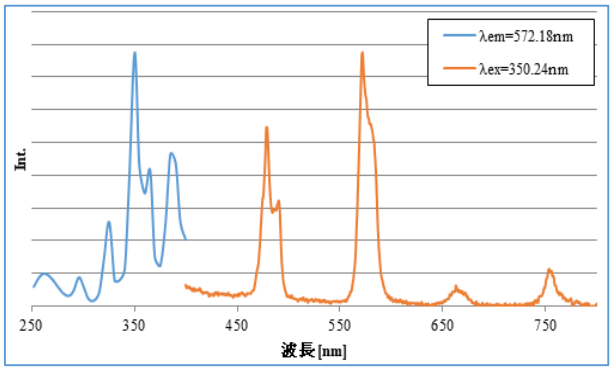
Red-light emission characteristics of $Sr_x(La_{9.2-x}Eu_{0.8})(SiO_4)_6O_{3-x/2}$ (x = 2-6) oxy-apatite phosphor

Optik, **182**, 944-948 (2019).

https://doi.org/10.1016/j.ijleo.2019.01.117

$Sr_3(La_{6.8}Dy_{0.2})(SiO_4)_6O_{25.5}$

吸収率：19%、内部量子収率：25%、外部量子収率：5%



（365 nm 照射下）

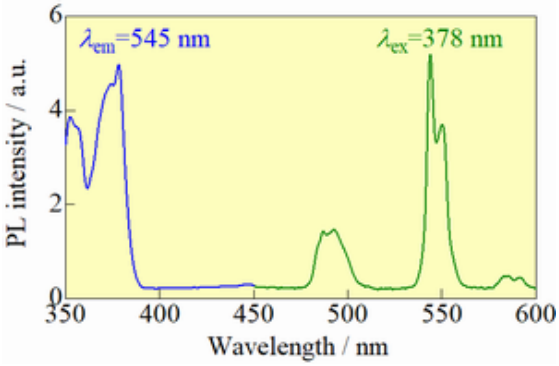
高輝度白色発光 Dy^{3+}添加ストロンチウム置換ランタンーケイ酸セラミックスの作製

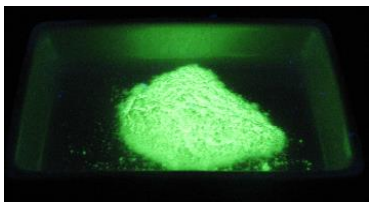
科学・技術研究, **9**, 133-136 (2020).

https://doi.org/10.11425/sst.9.133 ＜オープンアクセス誌＞

$Sr_6(La_{3.2}Tb^{III,IV}_{0.8})(SiO_4)_6O\alpha$

吸収率：20%、内部量子収率：50%、外部量子収率：10%





（365 nm 照射下）

Fluorescence properties of $Sr_x(La_{9.2-x}Tb_{0.8})(SiO_4)_6O_\alpha$ (x=2-6) prepared by heat-treating mixtures of $SrCO_3$, La_2O_3, SiO_2, and Tb_4O_7

Journal of the Ceramic Society of Japan, **129**, 223-225 (2021).

http://doi.org/10.2109/jcersj2.20183 ＜オープンアクセス誌＞