

NAME. & FACULTY Kazuyoshi Uematsu, Mineo Sato Faculty of engineering Kenji Toda Graduate School of Science and Technology		TITLE Persistent Luminescent Phosphors			
FIELD	IT	NANO	BIO · LIFE	ENVIRO · ENERGY	OTHERS

ABSTRACT Persistent luminescent phosphors are the materials which can emit a light for a long time even after stopping the excitation. Recently, SrAl₂O₃:Eu²⁺,Dy³⁺ as a long phosphorescent phosphor without radioactive materials was developed. This alkaline earth aluminate phosphors emit lights whose wavelength from green to violet. Blue-, green- and red-emitting phosphorescent phosphors are indispensable in order to obtain white and multi color lights.

The white light persistent luminescent phosphor, Mg₂SnO₄, has been invented by controlling synthetic atmospheres. In addition, the Mg₂SnO₄ phosphor doped with Mn²⁺ ions emits a green light persistently. The white light persistent luminescent phosphor can be applied to phosphors for fluorescent lamp available in electric power failure on emergency.

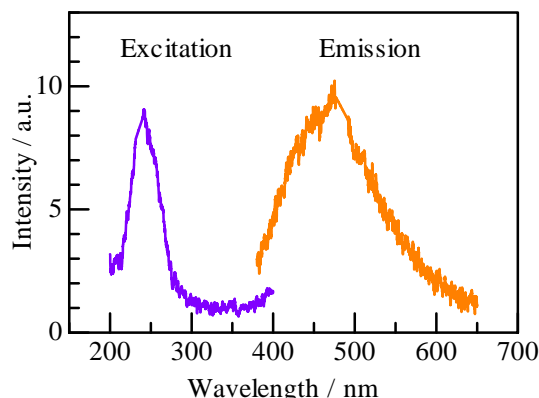
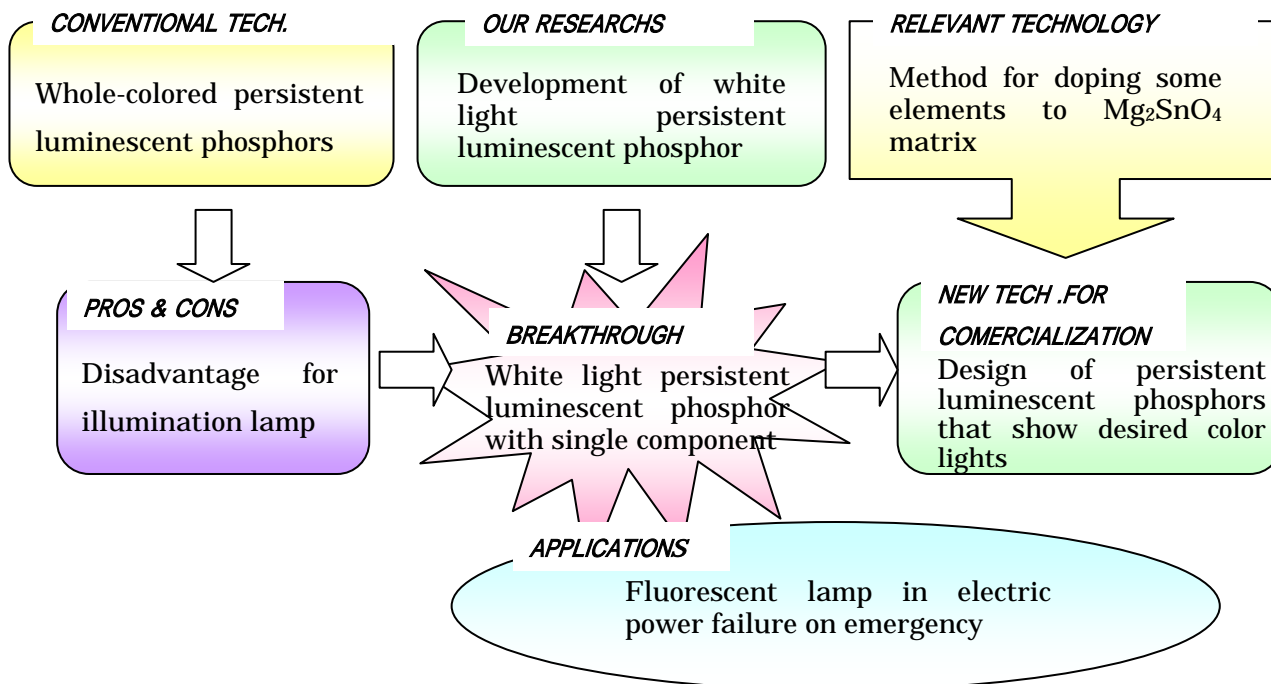


Fig. Excitation and emission spectra of un-doped Mg₂SnO₄ phosphor.

Flow Chart for Strategic Partnership University-Industry-Government to be Developed



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