FIG.1

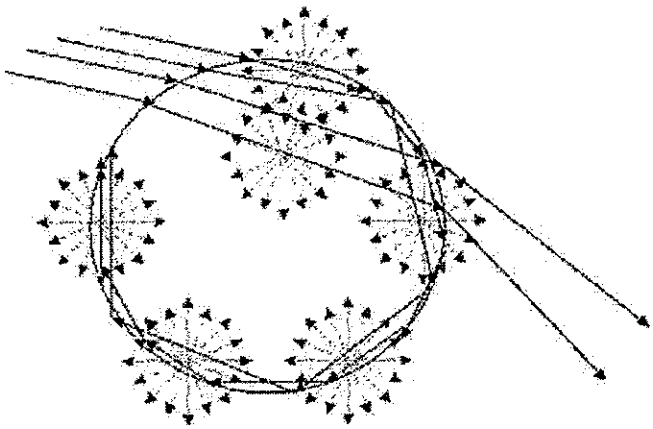
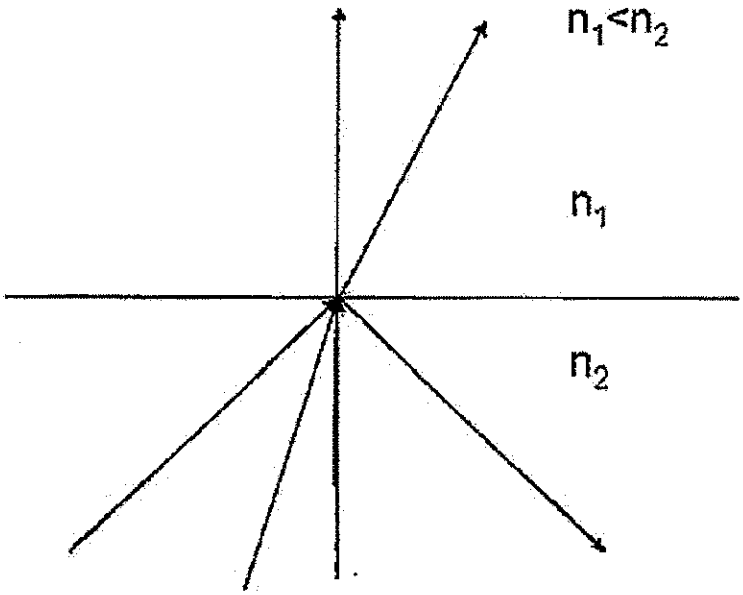


FIG.2



Critical angle

$$\theta_c = \sin^{-1}(n_1/n_2)$$

FIG.3

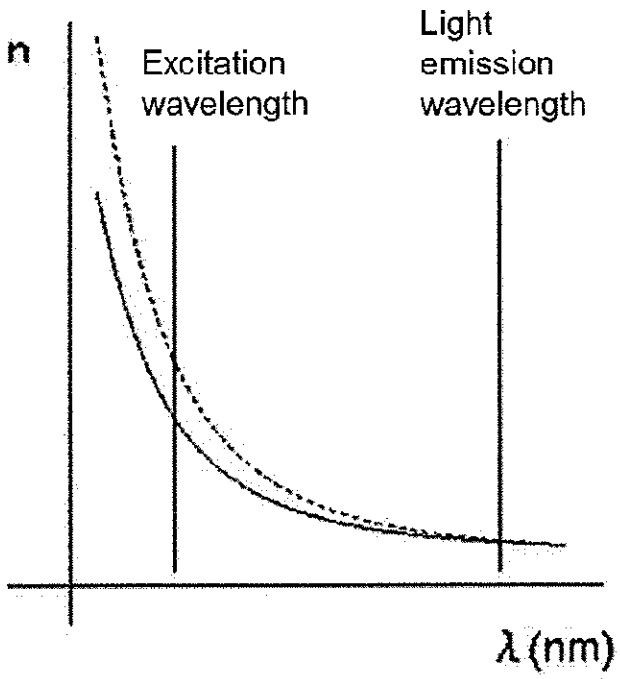

n
Excitation wavelength
Light emission wavelength
λ (nm)

FIG.4

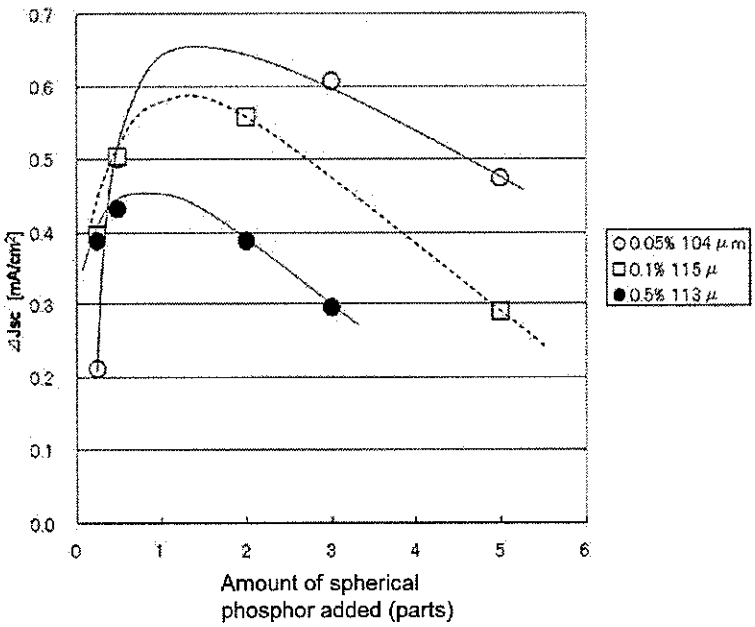

0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
ΔJsc [mA/cm²]
0
1
2
3
4
5
6
Amount of spherical phosphor added (parts)
○ 0.05% 104 μm
□ 0.1% 115 μ
● 0.5% 113 μ

FIG.5

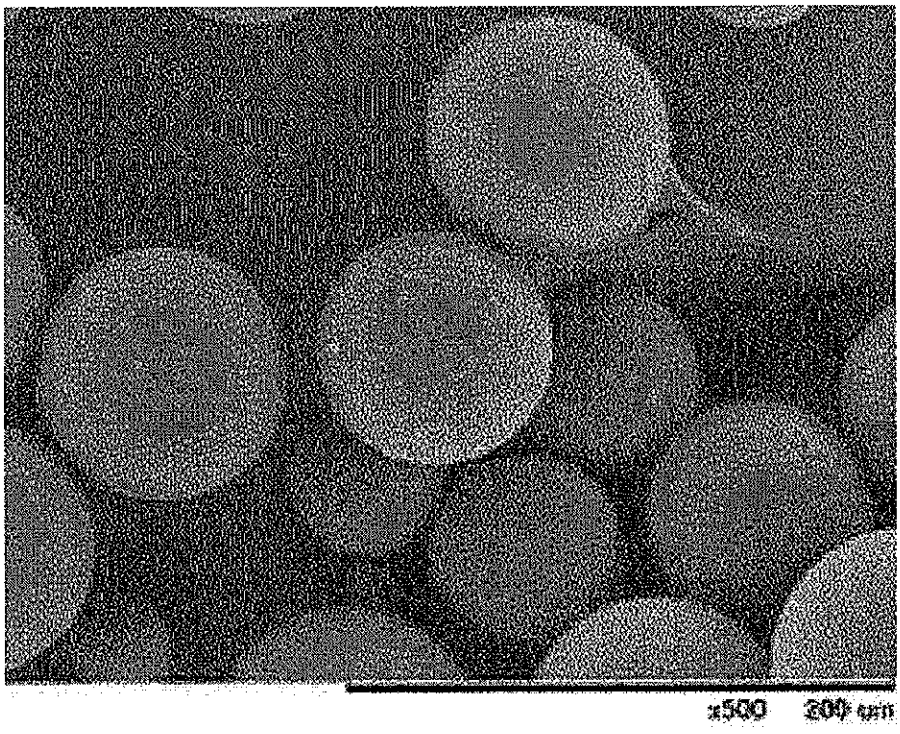


FIG.6

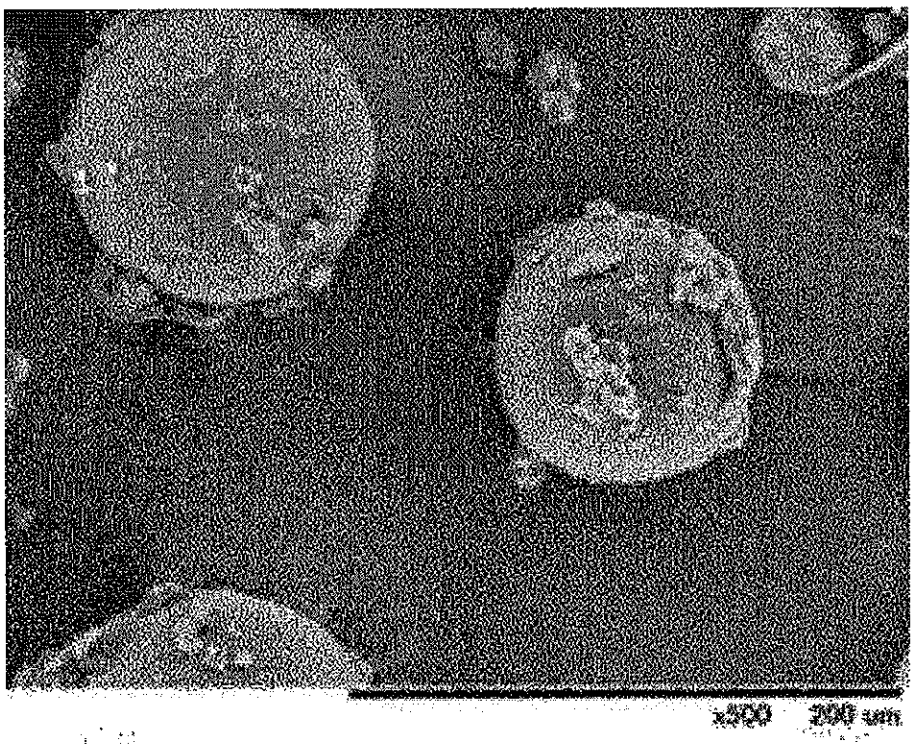
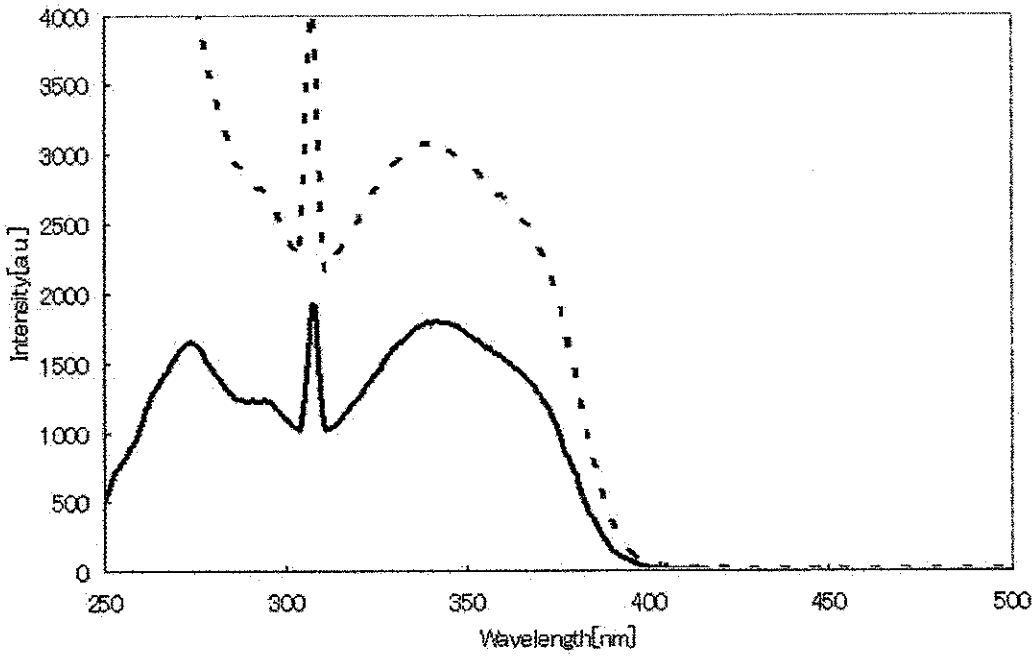


FIG.7


4000
3500
3000
2500
2000
1500
1000
500
0
Intensity[a.u.]
250
300
350
400
450
500
Wavelength[nm]