SUPPORTING INFORMATION

General synthesis of LiLn(MO$_4$)$_2$:Eu$^{3+}$ (Ln=La, Eu, Gd, Y; M=W, Mo) nanophosphors for near UV-type LEDs

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**Fig. S1** SEM images of LiLn(MoO$_4$)$_2$ products: (a) LiLa$_{0.95}$ Eu$_{0.05}$(WO$_4$)$_2$; (b) LiLa$_{0.95}$ Eu$_{0.05}$(MoO$_4$)$_2$; (c) LiEu(MoO$_4$)$_2$; (d) LiGd$_{0.95}$ Eu$_{0.05}$(MoO$_4$)$_2$; (e) LiY$_{0.95}$ Eu$_{0.05}$(MoO$_4$)$_2$; (f) LiY$_{0.95}$ Eu$_{0.05}$(MoO$_4$)$_2$.

Fig. S1 presents the SEM images of other LiLn(MO$_4$)$_2$:Eu$^{3+}$ samples. LiLn(MO$_4$)$_2$:Eu$^{3+}$ phosphors are very similar in morphology and are composed of the
pretty regular nanoparticles because of the same synthesis parameters, except for the
difference of particle size. The difference of particle size of LiLn(MO$_4$)$_2$:Eu$^{3+}$ is
related to the grinding of gel before being annealed, if grinding is very fully, the
as-obtained sample is very small. However, no matter what the particle size is, the
LiLn(MO$_4$)$_2$:Eu$^{3+}$ phosphors consist of pretty regular nanoparticles with size ranging
from 20 to 200 nm.