# Energy storage luminous powder radiation

Can persistent luminescent phosphors store light energy in advance?
Nature Materials 22,289-304 (2023) Cite this article Persistent luminescent phosphors can store light energy in advanceand release it with a long-lasting afterglow emission.

How to prepare energy-storing luminescent plastic?
This paper mainly studies the preparation technology and properties of energy-storing luminescent plastic. The colorless and colored energy-storing self-luminous plastics were prepared by using epoxy resin as the carrier, adding long-acting noctilucent powder into epoxy resin to fully mix and adding phenol-4-sulfonic acid to cure.

What are persistent luminescent materials?
The persistent luminescent materials are a class of photo-luminescent materials. When excited by light irradiation,the persistent luminescent materials absorb light energy and store in the matrix. After the excitation stops,the stored energy will be gradually released in the form of light emission,and this luminescence lifetime can last long.

Which light source is used to charge persistent luminescent phosphors?
As for the pumping source,ultraviolet-visible(UV-Vis) light is the most widely used source to charge persistent luminescent phosphors; however,persistent luminescent phosphors that can be charged with deep-red and even NIR light sources are highly desirable for biological applications.

Are the energy transfer modes in persistent luminescent materials the same?
It is worth to note that it remains to be investigatedwhether the energy transfer modes are the same in persistent luminescent materials and regular fluorescent materials,since in persistent luminescent materials the defects play an important role in persistent luminescence,and the effects on energy transfer are not reported so far.

Can luminous nanoparticles be used for light energy storage?
to fabricate a novel luminous and translucent wood composite by introducing luminous nanoparticles into a wood template. However, only a few research- ers have introduced luminous materials into the PCMs to fabricate composite PCMs for light energy storage usage.

In addition, by 2035, 84 percent of all lighting installations will save 6.472.10 18 J of energy. 256,257 Consequently, fundamental SSL research has a significant impact on global energy savings and a wide range of ...

In recent years, liquid air energy storage (LAES) has gained prominence as an alternative to existing large-scale electrical energy storage solutions such as compressed air (CAES) and pumped hydro energy

storage ...

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To compare the SrAl 2 O 4:Eu 2+, Dy 3+ powder before and after modification and understand the distribution situation of ASR/PAP @ SrAl 2 O 4:Eu 2+, Dy 3+ composites in the luminous fiber, ...

Overall, strontium aluminate doped with Eu ²+ co-doped with Dy ³+ (SrAl 2 O 4 :Eu ²+, Dy ³+ ) phosphors and self-luminous pavement for energy storage had great prospects in improving ...

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