

Supporting Information (SI)

Mechanoluminescent light source for a fluorescent probe molecule

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(SI-1) ML image of ML test pellet composed of CYAE.

As per the method proposed in a previous study, a mechanoluminescent (ML) test pellet composed of $\text{CaYAl}_3\text{O}_7:\text{Eu}$ (CYAE)¹ was prepared by mixing CYAE powder with an optical epoxy resin and forming a composite disk (diameter: 25 mm; thickness: 15 mm).²⁻⁵ ML images were recorded when a compressive load of up to 1000 N was applied using a universal testing machine (RTC-1310A). CYAE showed blue mechanoluminescence, and the mechanoluminescence intensity distribution have well consistent with the simulated internal stress in the pellet. The ML intensity at the front of the pellet was ca. 10 nW/cm².

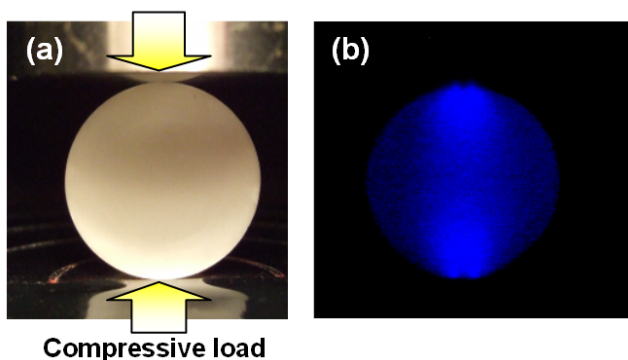


Fig. S1. ML images (a) before and (b) during the application of a compressive load of up to 1000 N at a loading speed of 3 mm/min. Sample: ML testing pellet composed of CYAE.

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