

A light bulb moment: Tin halides for brighter LEDs

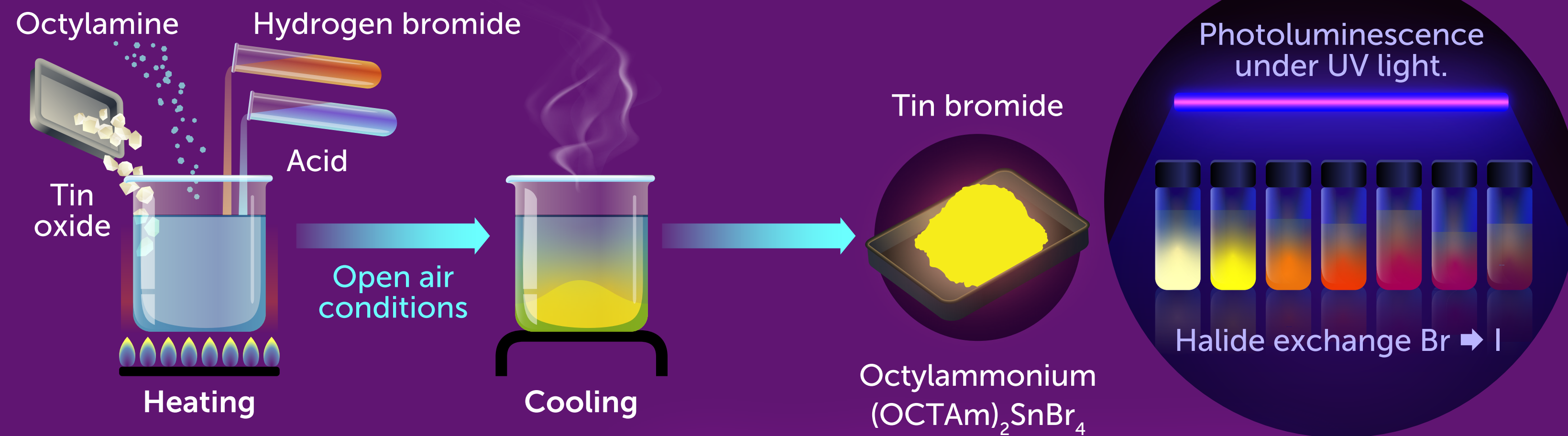
Cost and energy efficient lamp prototypes use ultraviolet (UV) pumped white LED with coatings of photoluminescent yellow phosphor materials...

....which are environmentally toxic and unstable.



Using materials that are more environmentally friendly and non-toxic in the synthesis of fluorescent phosphors is essential.

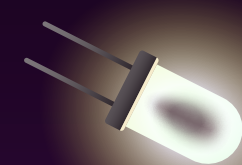
Synthesis of highly emissive tin halide perovskites.



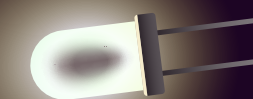
What does this novel phosphor mean for the...

FUTURE?

Superior photoluminescence



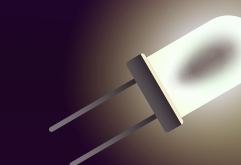
Easily reproducible in high yield



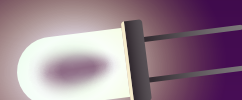
Environmentally safe



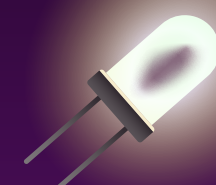
Highly stable



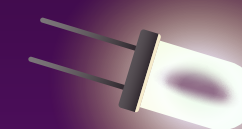
Excellent optical performance



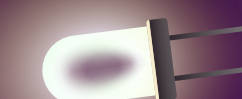
Ultra long life-time



Covers full visible spectrum



Excellent color rendering



Synthesis of novel yellow emitting tin halide phosphors for more efficient environmentally friendly LEDs.

Chemical
Science

PICK
OF THE
WEEK

Aqueous acid-based synthesis of lead-free tin halide perovskites with near-unity photoluminescence quantum efficiency

Wang, Nie, Deng *et al.* (2019)

DOI: 10.1039/C9SC00453J

