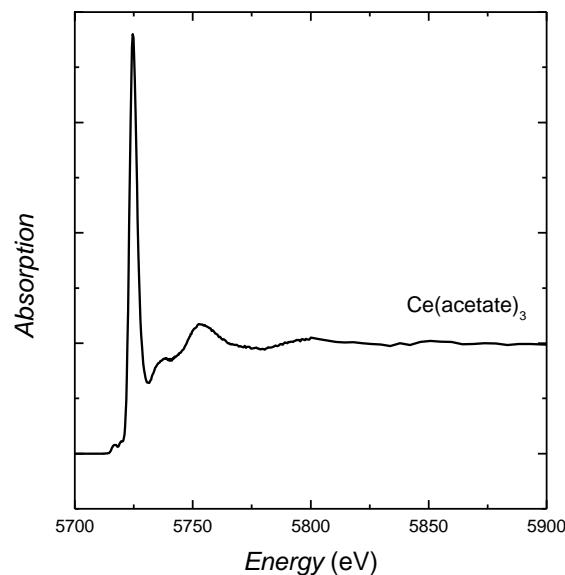


## Supplementary Information

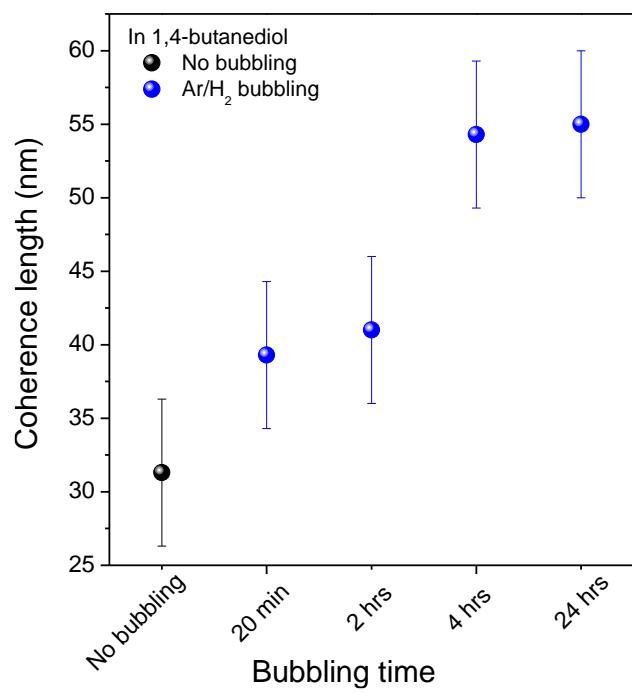
### Twofold advantage of gas bubbling for the advanced solvothermal preparation of efficient YAG:Ce nanophosphors

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Bruyère,<sup>a</sup> A. Barbara,<sup>a</sup> Jean-Louis Hazemann,<sup>a</sup> Alain Ibanez,<sup>a</sup> Géraldine Dantelle<sup>a\*</sup>

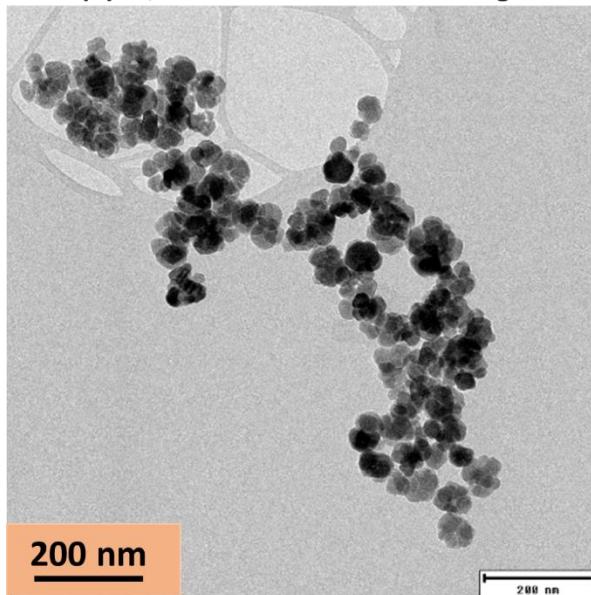


**Figure S1:** XANES spectrum of cerium acetate precursor.

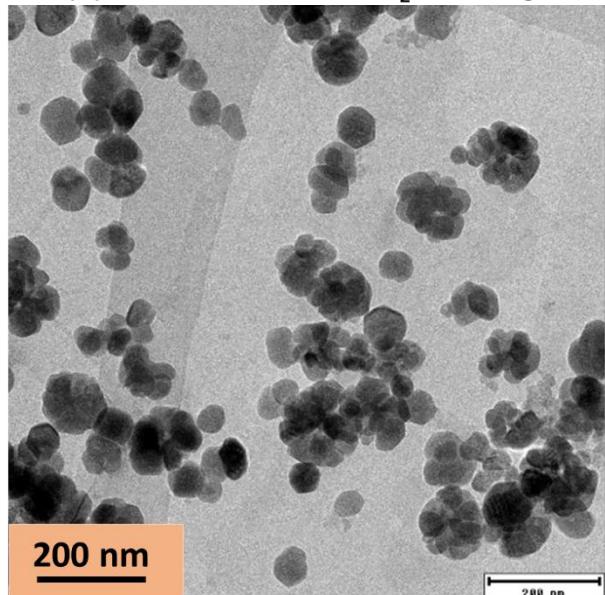


**Figure S2.** Evolution of the nanocrystal coherence length as a function of Ar/H<sub>2</sub> bubbling time.

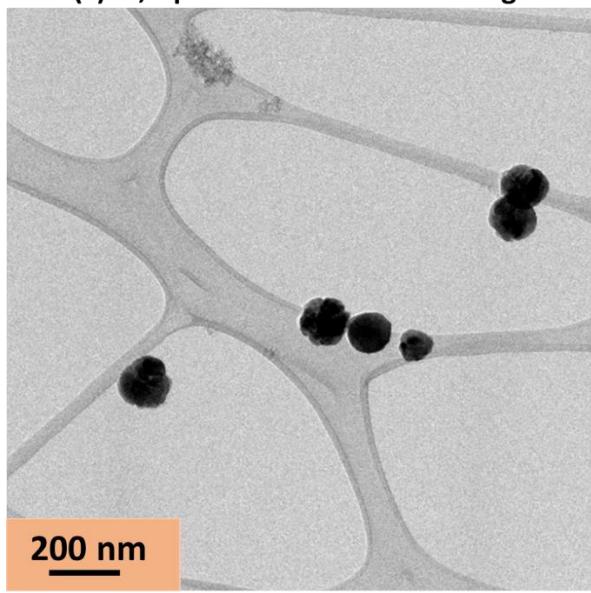
(a): 1,4-butanediol. No bubbling



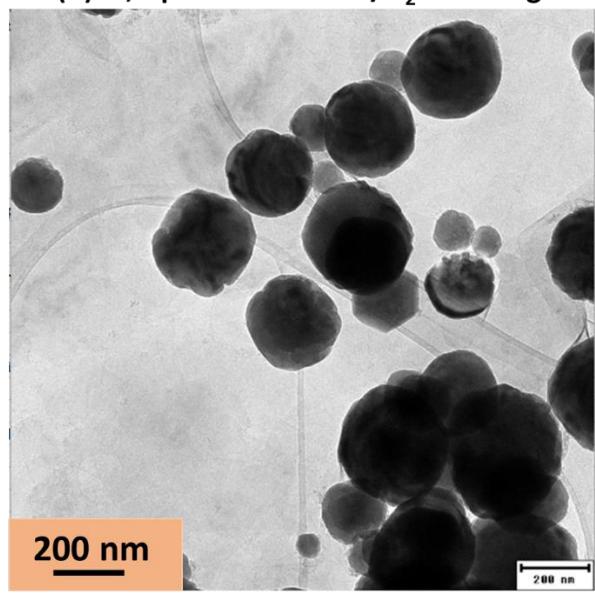
(b): 1,4-butanediol. Ar/H<sub>2</sub> bubbling



(c): 1,5-pentanediol. No bubbling



(d): 1,5-pentanediol. Ar/H<sub>2</sub> bubbling



**Figure S3:** TEM images of YAG:Ce NCs as a function of bubbling treatment and solvent: (a) No bubbling, in 1,4-butanediol and (b) bubbling Ar/H<sub>2</sub> for 4 h, in 1,4-butanediol; (c) no bubbling, in 1,5-pentanediol and (d) bubbling Ar/H<sub>2</sub> for 4 h, in 1,5-pentanediol.