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Supplementary Information

Interface-Directed Synthesis of $CsPbBr_3$-based Particles with Water-ODE Antisolvent Systems

Saurabh Singh [a)*], Xiyu Wen [b)], Fuqian Yang [a)]

[a)] Materials Program, Department of Chemical and Materials Engineering, University of Kentucky, Lexington, KY 40506, USA

[b)] Center for Aluminium Technology, University of Kentucky, Lexington, KY 40506, USA

1. EDS Studies

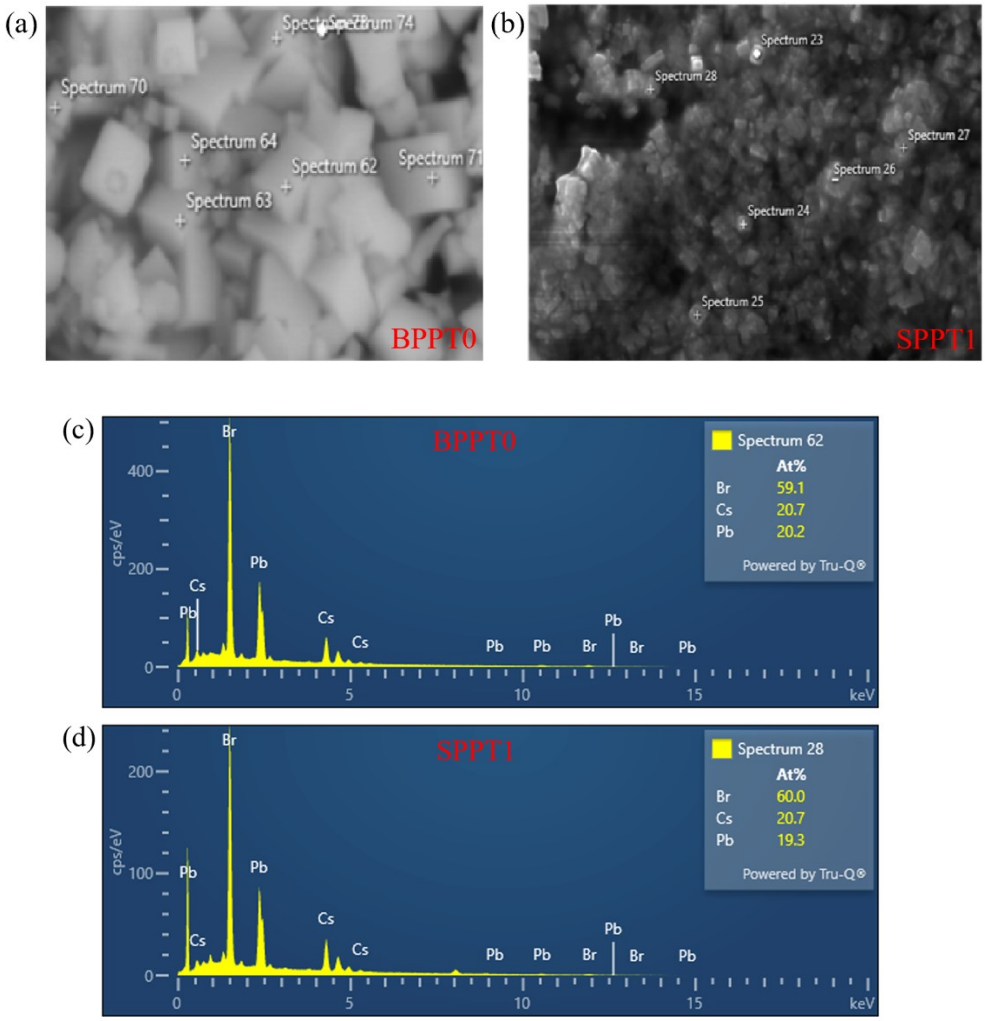

Fig. S1. EDS Spectral analyses of (a, c) BPPT0 and (b, d) SPPT1.

2. Drop-Casting Concentration Parameters and Optical Images

Table S1. Drop-casting concentrations used for producing BPPTs.

DI water: ODE	Mass (g)	Concentration (μg/μl)
1:1	0.0015	27.2
1:0.5	0.0034	61.8
1:0.25	0.0032	58.1
1:0	0.0038	69

Table S2. Drop-casting concentrations used for producing SPPTs.

DI water: ODE	Mass (g)	Concentration (μg/μl)
1:1	0.0039	70.9
1:0.5	0.0021	38.1
1:0.25	0.0017	30.9
1:0	0.0009	16.3

2.1 Optical Images

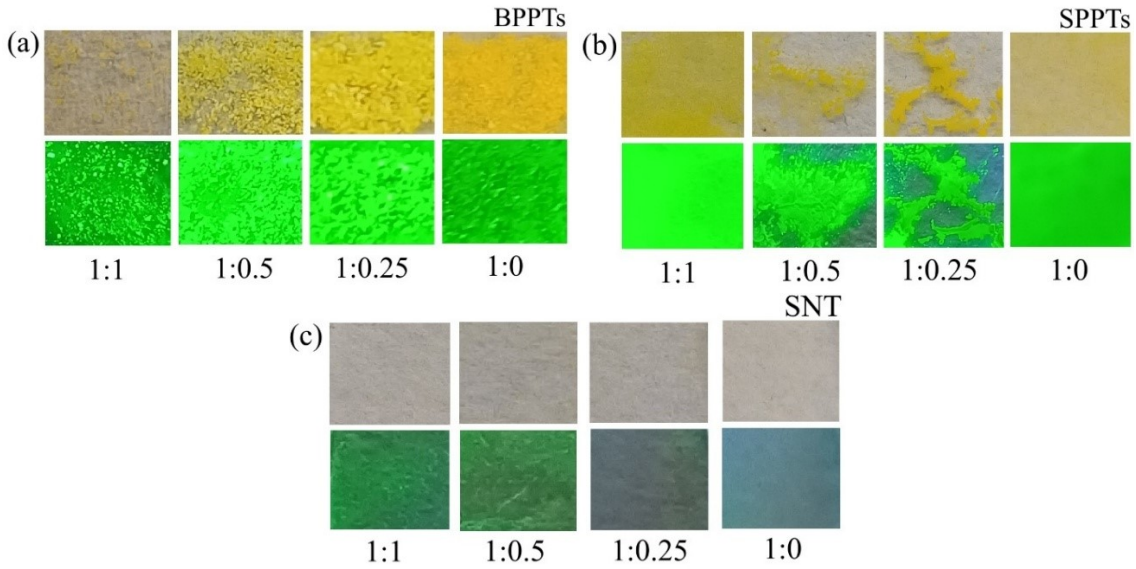

Fig. S2. Optical images under white light (top row) and UV light (~365 nm) (bottom row) for (a) BPPTs, (b) SPPTs, (c) SNT, prepared via four different ratios of DI water to ODE.

3. Absorbance-PL Spectra

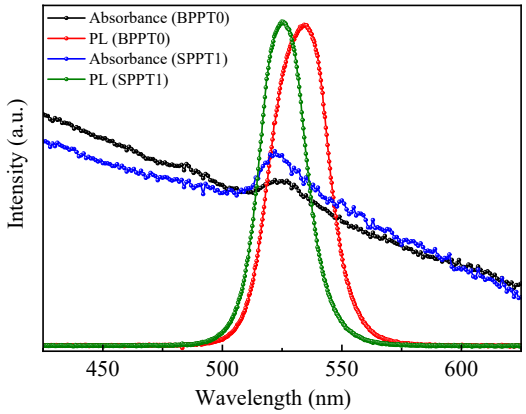

Fig. S3. Absorbance and PL spectra of BPPT0 and SPPT1.

4. Time-resolved photoluminescence (TRPL) decay curve-fitting parameters

Table S3. Tri-exponential fitting parameters obtained from TRPL decay analysis for BPPT0 and SPPT1-derived films, including decay lifetimes (τ_i), relative amplitude fractions (A_i), amplitude-weighted average lifetimes ($<\tau>$), and reduced chi-square values (χ^2).

Sample	A_1 (%)	τ_1 (ns)	A_2 (%)	τ_2 (ns)	A_3 (%)	τ_3 (ns)	$<\tau>$ (ns)	χ^2
BPPT0	6.75	0.29	15.97	2.26	77.28	39.85	39.61	1.55
SPPT1	10.70	0.25	70.50	2.22	18.80	17.48	3.84	1.34