

Supporting Information

for

PTFE-based microreactor system for the continuous synthesis of full-visible-spectrum emitting cesium lead halide perovskite nanocrystals

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Additional experimental data, color luminescence, photoluminescence spectra, high-resolution transmission electron microscopy images, absorption and photoluminescence emission spectra

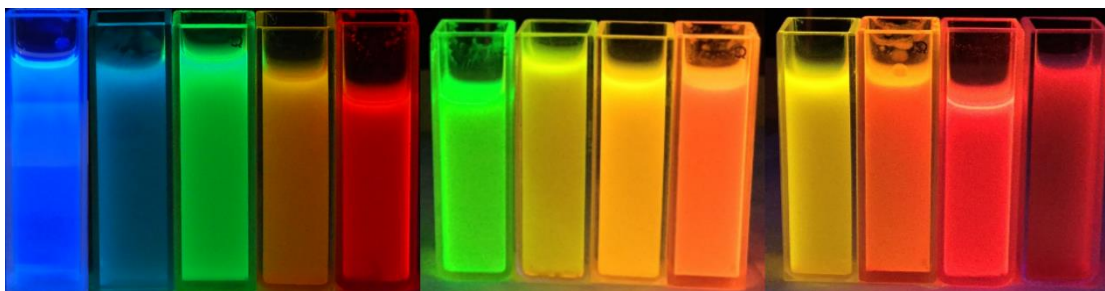


Figure S1: Color luminescence of CsPbX₃ QDs solutions under ultraviolet light.

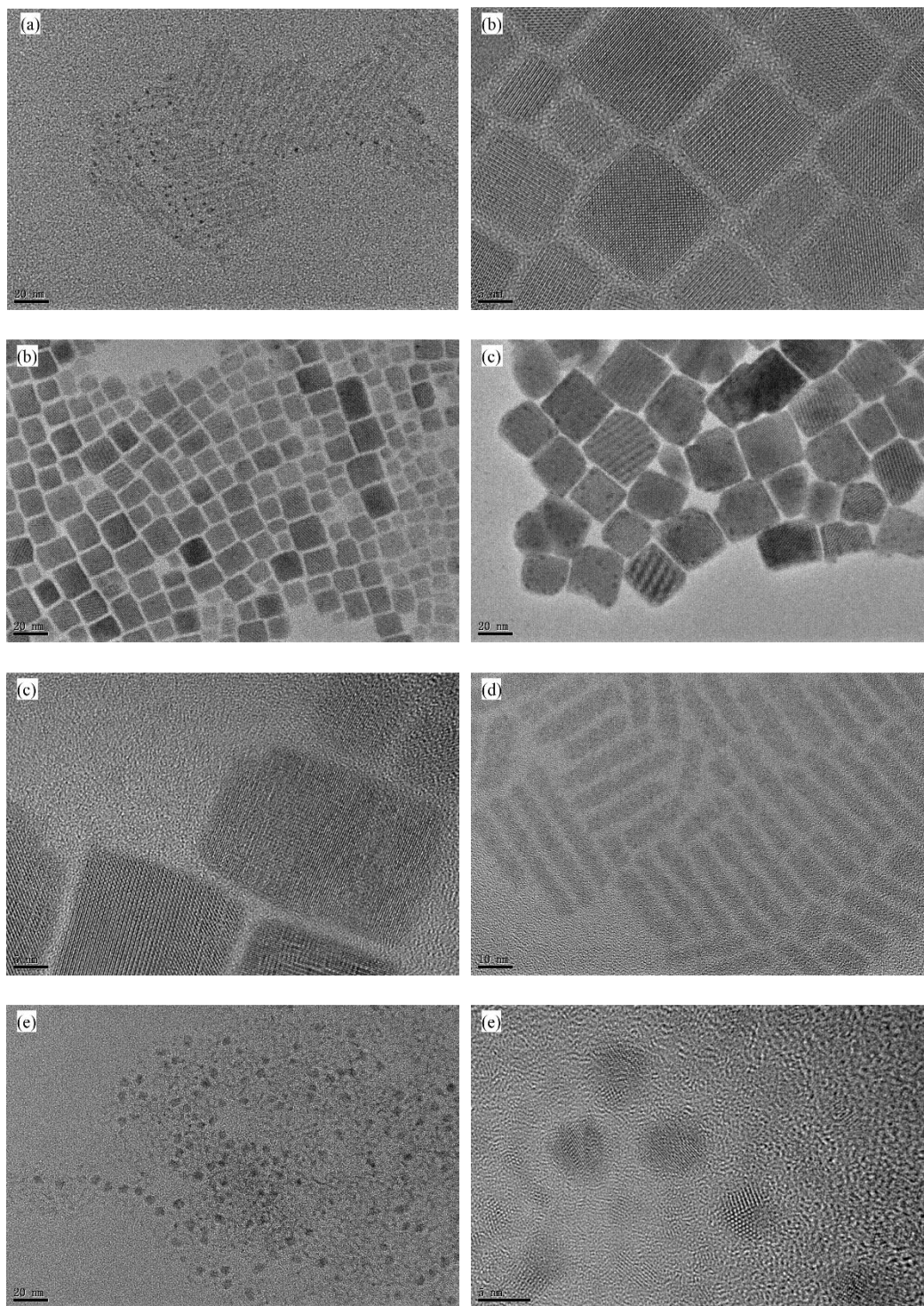


Figure S2: HRTEM images of CsPbX₃ QDs of five colors; (a) blue, (b) green, (c) yellow, (d) orange, and (e) red.

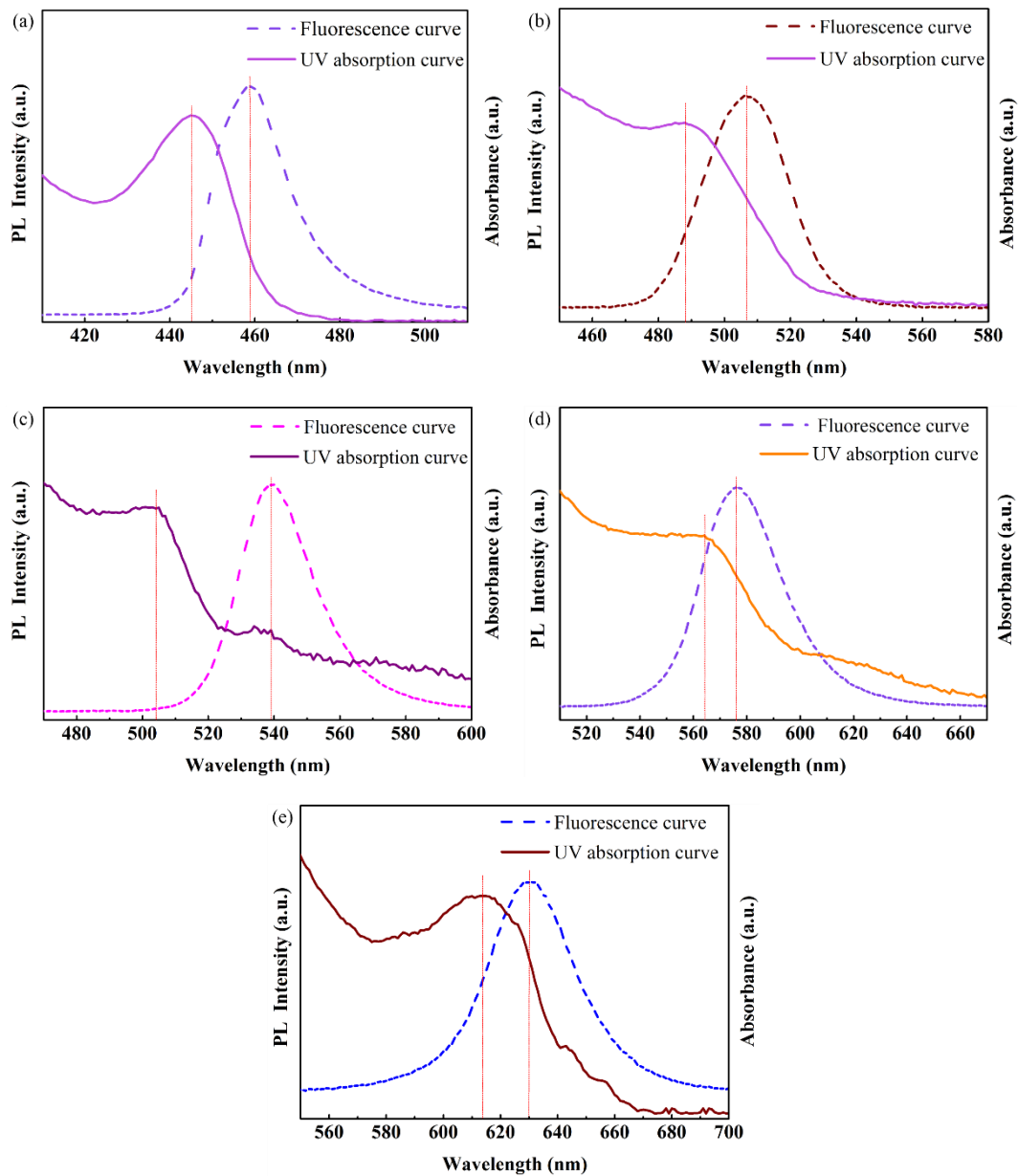
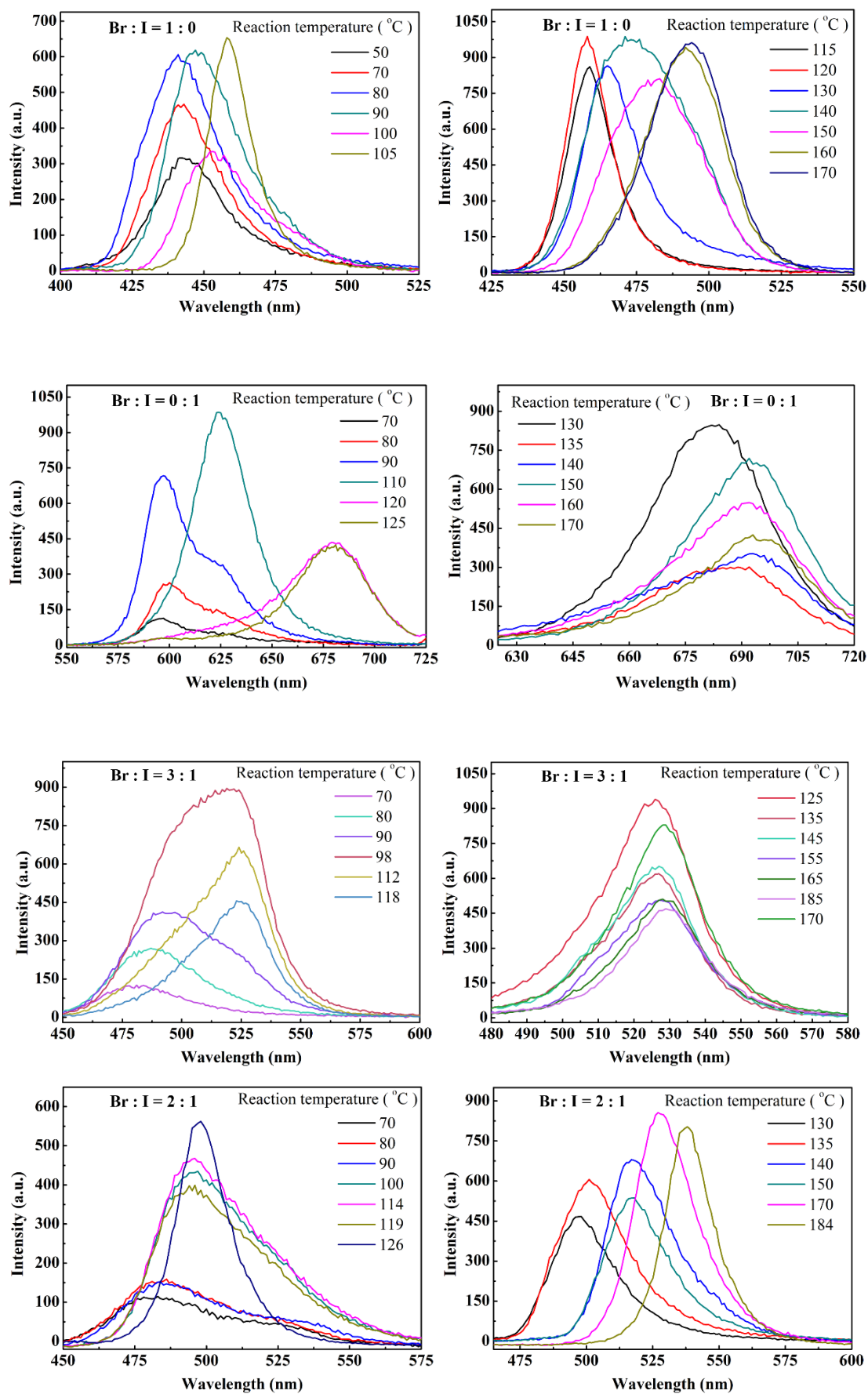


Figure S3: Absorption and PL emission spectra of CsPbX₃ QDs; (a) blue, (b) green, (c) yellow, (d) orange, and (e) red.



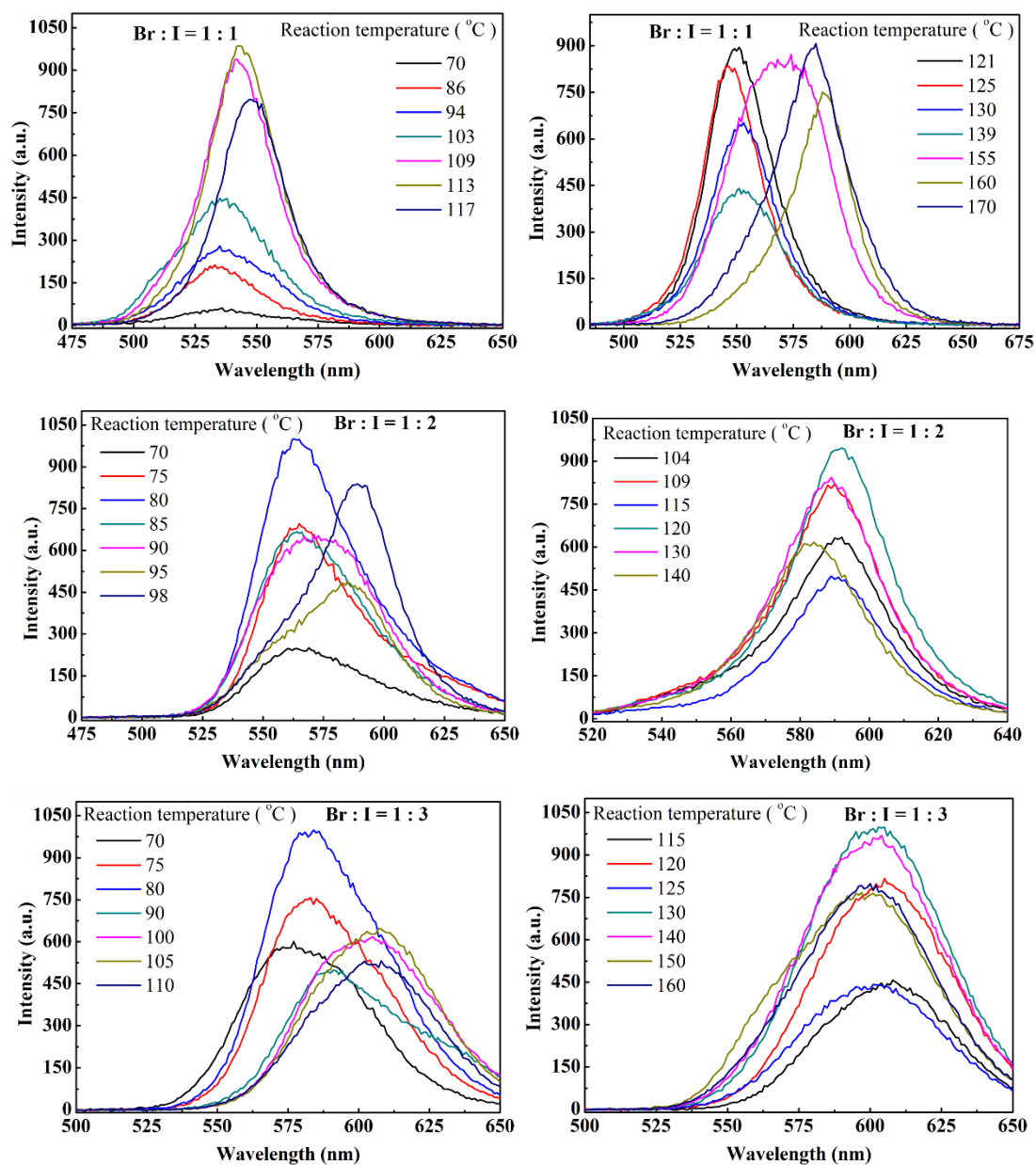


Figure S4: PL spectra of CsPbBr_xI_{3-x} QDs synthesized with different mole ratios of Br/I at different reaction temperatures.

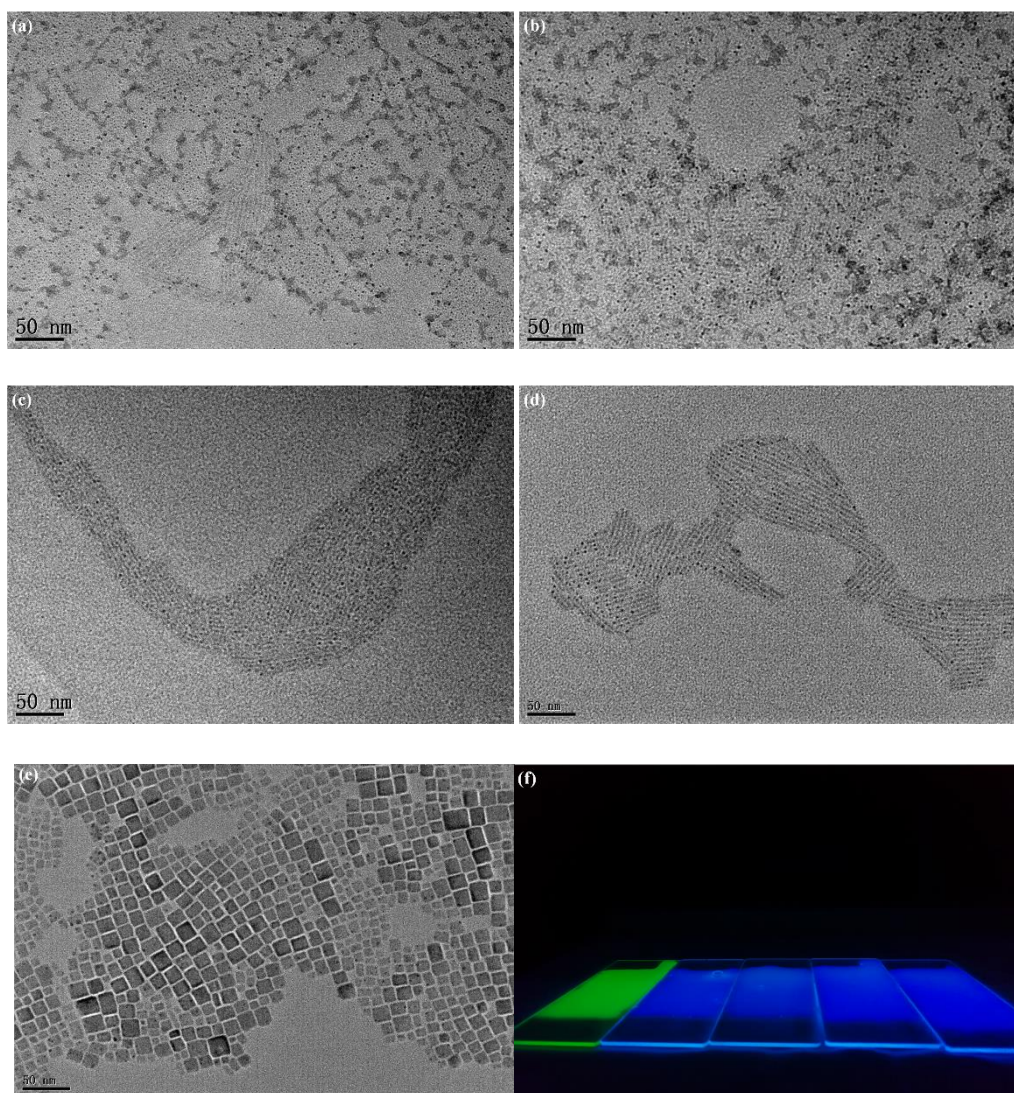


Figure S5: HRTEM images of CsPbBr₃ QDs synthesized at different reaction temperatures; (a) 80 °C, (b) 100 °C, (c) 120 °C, (d) 140 °C, and (e) 160 °C; (f) color luminescence of CsPbBr₃ QDs solutions under ultraviolet light.

Table S1: PL peaks of alloyed CsPbBr_xI_{3-x} QDs prepared at different reaction temperatures.

Molar ratio Br : I	Reaction temperature (°C)	PL peak (nm)	Molar ratio Br : I	Reaction temperature (°C)	PL peak (nm)
1 : 0	50	444	0 : 1	70	597
	90	448		90	598
	120	458		130	682
	150	483		150	692
	170	495		170	695
Molar ratio Br : I	Reaction temperature (°C)	PL peak (nm)	Molar ratio Br : I	Reaction temperature (°C)	PL peak (nm)
3 : 1	70	478	2 : 1	70	481
	90	492		90	485
	125	525		119	495
	155	527		140	517
	170	528		184	538
Molar ratio Br : I	Reaction temperature (°C)	PL peak (nm)	Molar ratio Br : I	Reaction temperature (°C)	PL peak (nm)
1 : 1	70	534	1 : 2	70	562
	94	535		90	571
	121	551		104	592
	139	552		120	692
	170	585		140	582
Molar ratio Br : I	Reaction temperature (°C)	PL peak (nm)			
1 : 3	70	575			
	90	588			
	115	608			
	140	603			
	160	602			

Table S2: Experimental conditions for the synthesis of perovskite QDs.

	CsPbX ₃	Color	Velocity (ml/h)	Pre-reaction temperature (°C)	Reaction length (cm)	Reaction temperature (°C)
a	CsPbBr ₃	blue	10	70	70	120
b	CsPbBr ₃	green	10	70	70	175
c	CsPbBr ₂ I	yellow	10	70	70	185
d	CsPbBrI ₂	orange	10	70	70	100
e	CsPbI ₃	red	10	70	70	110