Supplementary Information

Insights into supramolecular-interaction-regulated piezochromic carbonized polymer dots

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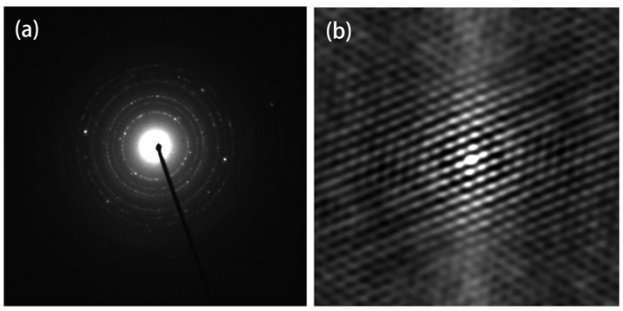

Fig. S1 (a) Selected area electron diffraction (SEAD) of CPDs-1, (b) High-resolution transmission electron micrograph (HR-TEM) of CPDs-1.

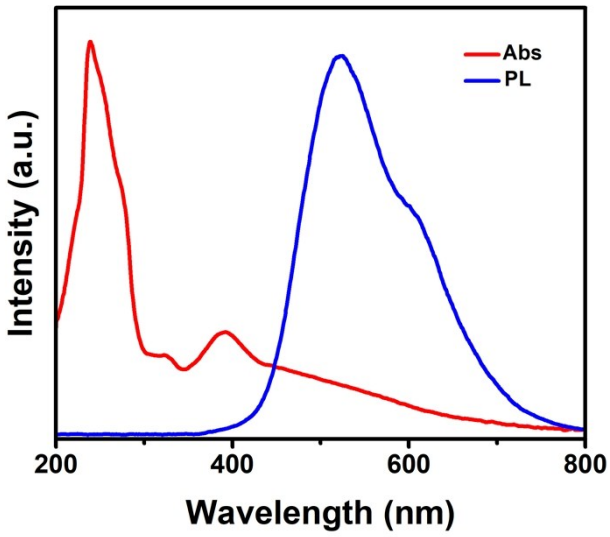

Fig. S2 The absorption and PL spectra of CPDs-1 under ordinary pressure.

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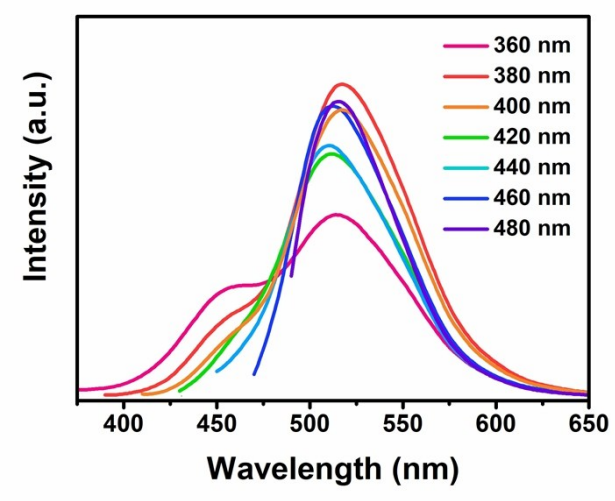

Fig. S3 The PL spectra of CPDs-1under different excitation wavelengths under ordinary pressure.

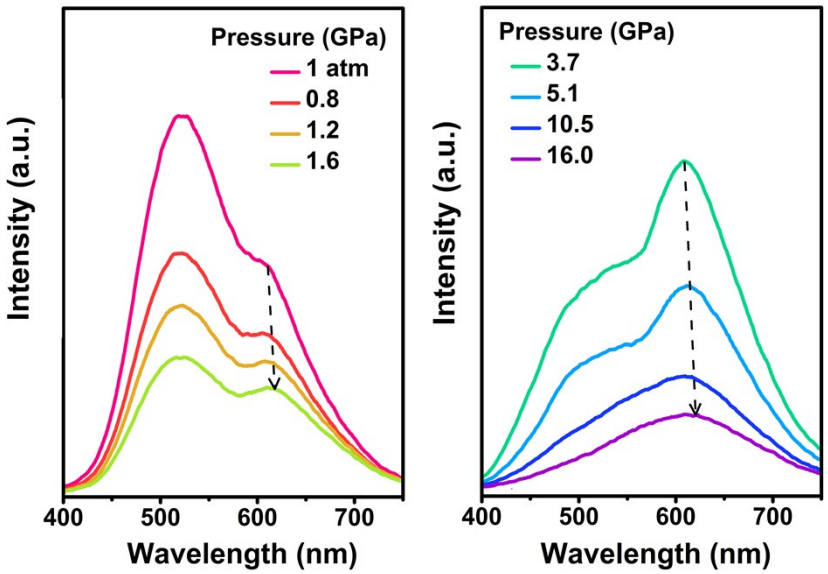

Fig. S4 PL spectra changes of CPDs-1 under high pressure.

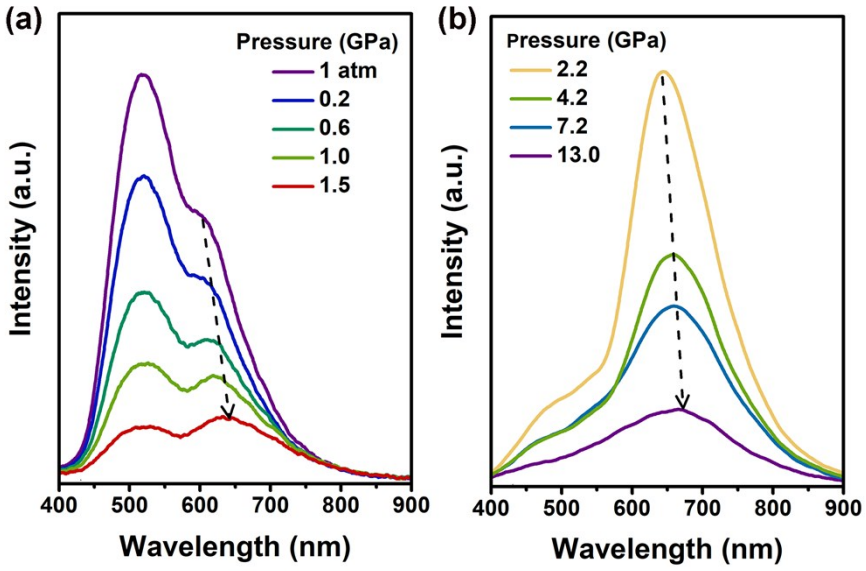

Fig. S5 PL spectra changes of CPDs-1 under high pressure.

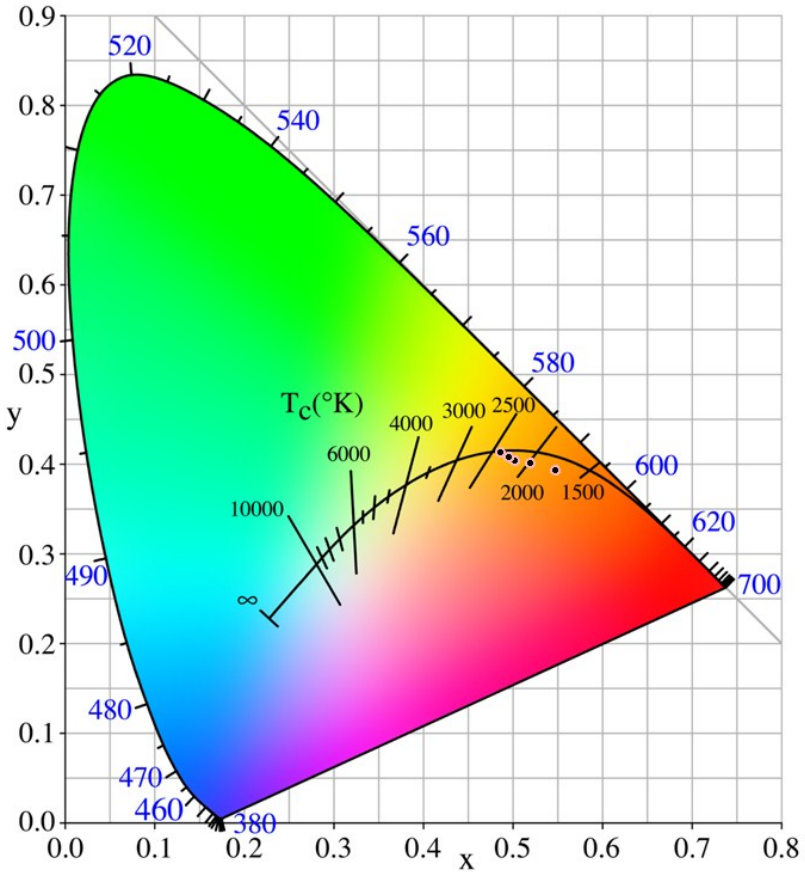

Fig. S6 Pressure-dependent chromaticity coordinates (CIE) of solid CPDs-1.

Table S1. Chromaticity coordinates (CIE) and peak statistics at selected pressures for solid CPDs-1.

Pressure (GPa)	CIE (x)	CIE (y)	Peak (nm)
0	0.5481	0.3932	593
0.2	0.5215	0.4041	596
0.8	0.5201	0.4007	599
3.7	0.504	0.4038	603
7.5	0.4962	0.4081	609
10.7	0.4924	0.4110	612
13.5	0.4909	0.4134	614
17.8	0.4865	0.4136	623

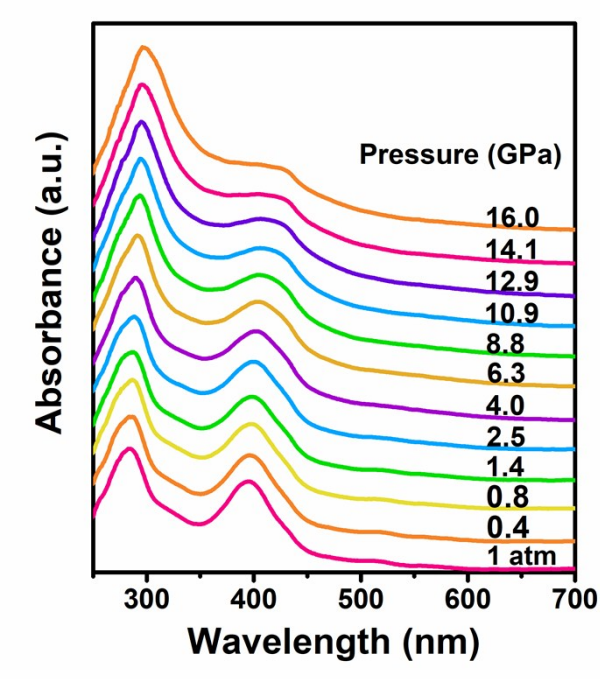

Fig. S7 Absorption spectra against pressures for CPDs-1 in situ measured in a DAC apparatus.

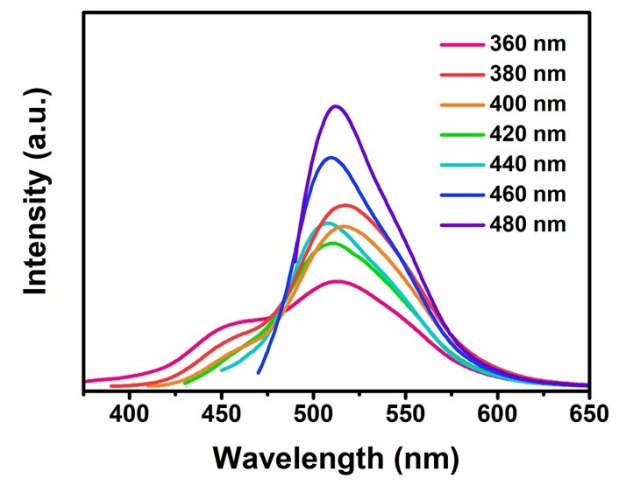

Fig. S8 PL spectra of CPDs-2 under different excitation wavelengths under ordinary pressure.

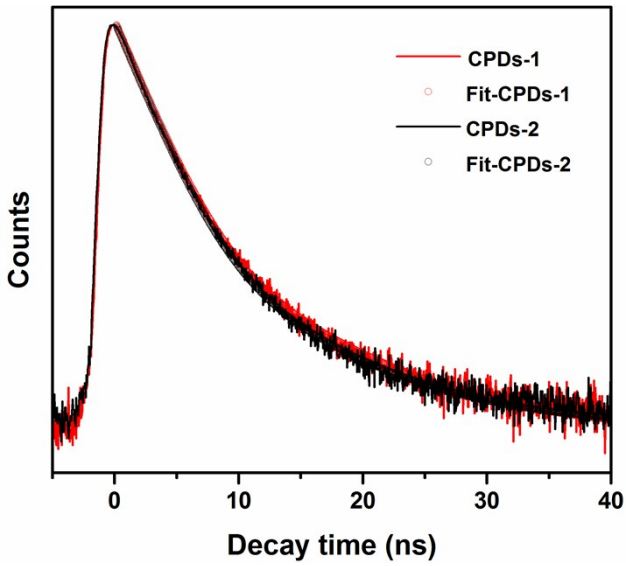

Fig. S9. Time-resolved phosphorescence spectrum of CPDs-1and CPDs-2.

Table S2. Fluorescence Lifetime of CPDs-1and CPDs-2.

samples	λ_{ex} (nm)	λ_{detect} (nm)	τ_1 (ns)	A_1 (%)	τ_2 (ns)	A_2 (%)	τ_{avg} (ns)
CPDs-1	375	530	2.18	82.84	8.11	17.16	3.19
CPDs-2	375	530	2.17	84.46	7.81	15.54	3.05

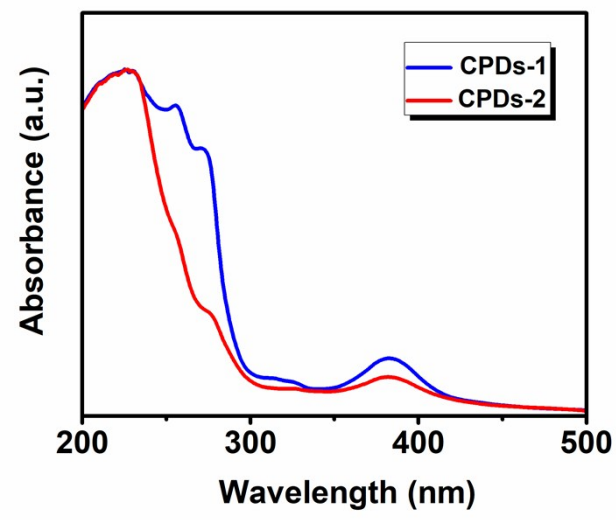

Fig. S10 The absorption spectra of CDs-2 and CPDs-1.

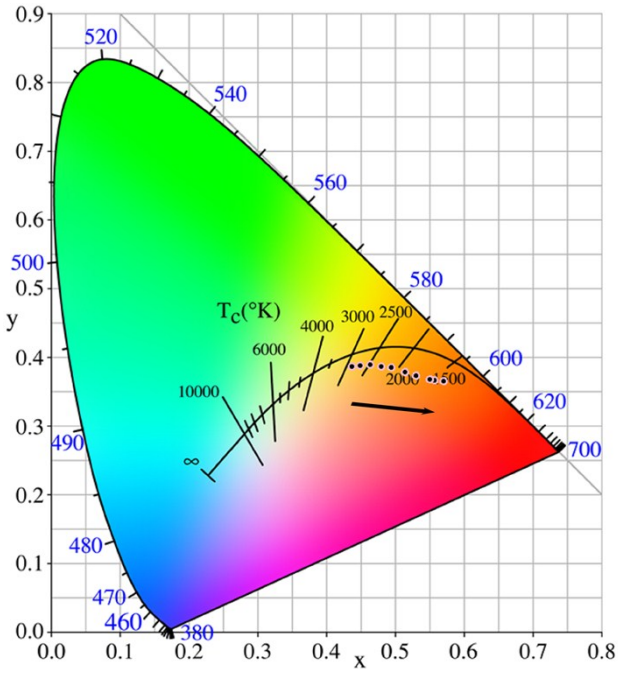

Fig. S11 Pressure-dependent chromaticity coordinates (CIE) of PVA/CPDs-1.

Table S3 Chromaticity coordinates (CIE) and peak statistics at selected pressures for PVA/CPDs-1.

Pressure (GPa)	CIE (x)	CIE (y)	Peak (nm)
0	0.5703	0.3660	592
1.0	0.5573	0.3663	596
1.7	0.5503	0.3683	598
3.2	0.5308	0.3738	602
5.9	0.5152	0.3791	609
8.8	0.4949	0.3850	610
11.3	0.4802	0.3871	613
13.9	0.4639	0.3894	616
17.2	0.4488	0.3886	611
20.1	0.4372	0.3864	608

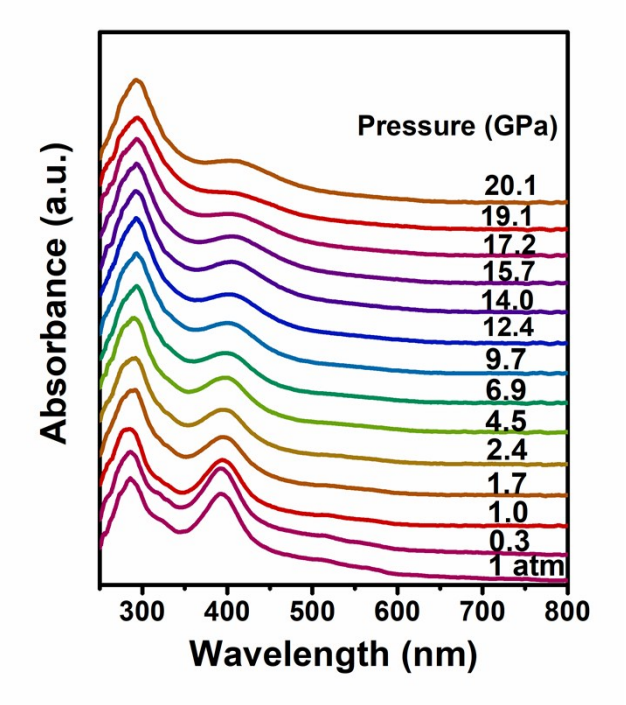

Fig. S12 Absorption spectra against pressures for PVA/CPDs-1 in situ measured in a DAC apparat

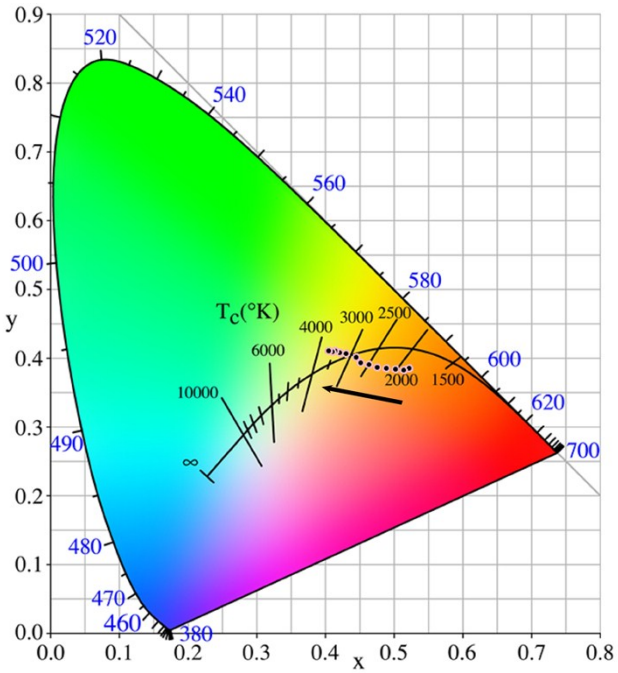

Fig. S13 Pressure-dependent chromaticity coordinates (CIE) of PVA/CPDs-2.

Table S4 Chromaticity coordinates (CIE) and peak statistics at selected pressures for PVA/CPDs-2.

Pressure (GPa)	CIE (x)	CIE (y)	Peak (nm)
0	0.5226	0.3858	587
0.6	0.5153	0.3832	589
1.4	0.5026	0.3845	590
2.8	0.4893	0.3856	591
4.3	0.4759	0.3873	593
6.6	0.4643	0.3906	592
7.5	0.4521	0.3932	591
10.7	0.4450	0.4019	589
12.6	0.4309	0.4064	586
14.6	0.4219	0.4081	567
16.9	0.4148	0.4105	564
18.1	0.4106	0.4097	560
20.3	0.4053	0.4104	556

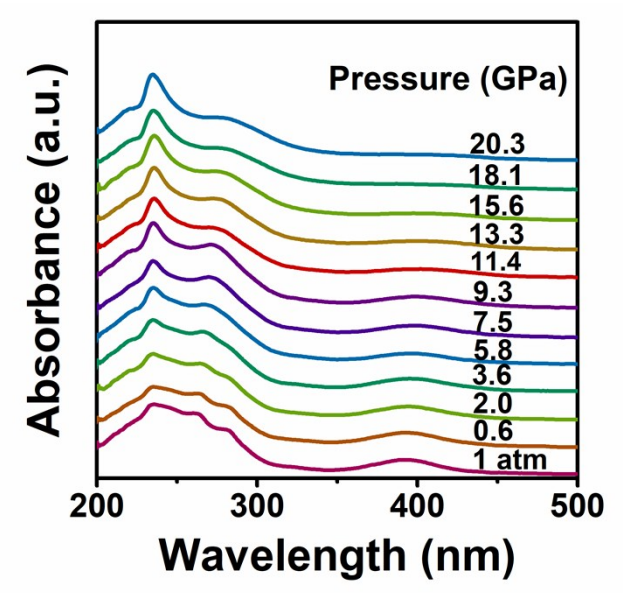

Fig. S14 Absorption spectra against pressures for PVA/CPDs-2 in situ measured in a DAC apparatus.

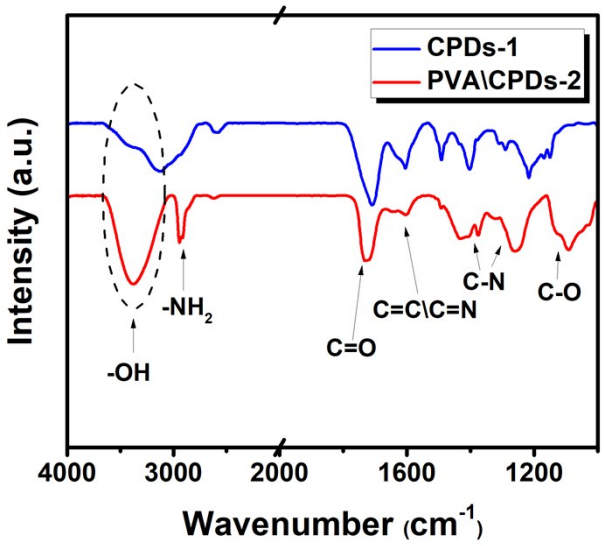

Fig. S15 FT-IR spectra of CPDs-1 and PVA\CPDs-2.

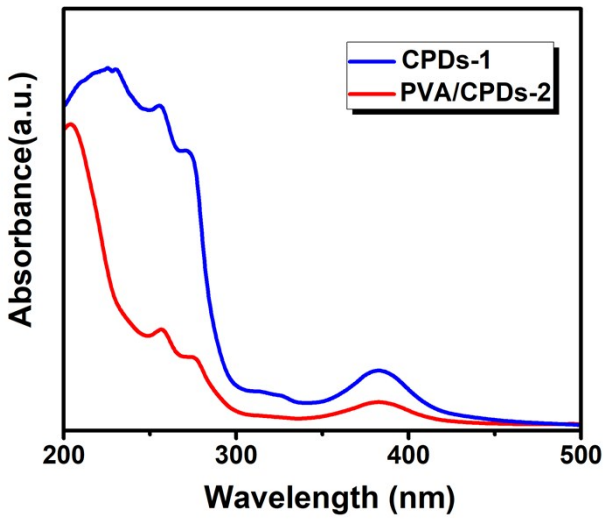

Fig. S16 Absorption spectra of PVA/CDs-2 and CPDs-1.