

*Supporting Information for*

**A simple but efficient strategy to enhance hydrostability of intensely fluorescent Mg-based coordination polymer (CP) via forming composite of CP with hydrophobic PVDF**

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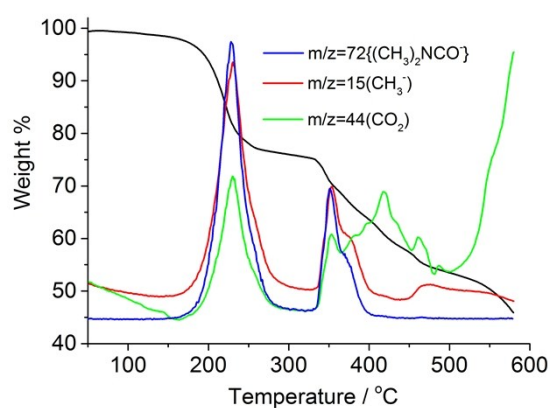
**Table S1** Preparation of other **1@PVDF** composites

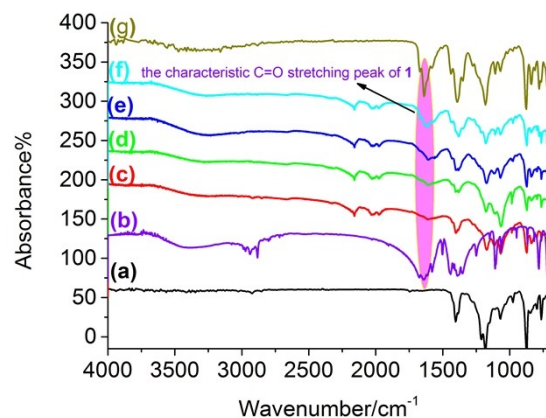
No.	wt. % <b>1@PVDF</b>	CP <b>1</b> (mg)	PVDF (mg)	Pressure (MPa)	Temperature (°C)
1	<b>10</b>	10	90	6	190
2	<b>15</b>	15	85	6	190
3	<b>20</b>	20	80	6	190
4	<b>25</b>	25	75	6	190
5	<b>30</b>	30	70	6	190

**Table S2** Selected bond lengths (Å) and angles (°) in **1**

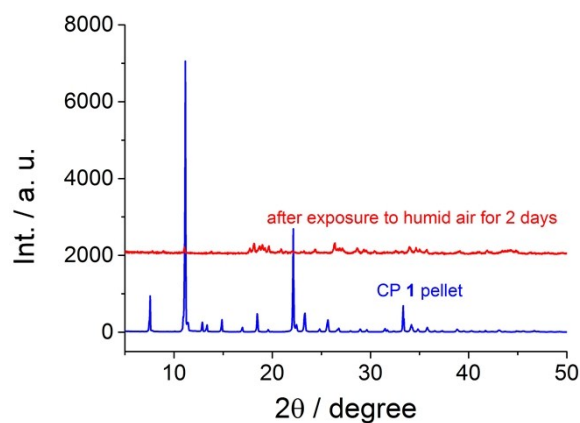
bond lengths					
Mg1–O1	2.0079(14)	Mg1–O3	2.0489(14)	Mg1–O5	2.0760(15)
Mg1–O4	2.1127(17)	Mg1–O2#3	2.1304(16)	Mg1–O2	2.1321(14)
bond angles					
O1–Mg1–O3	89.28(5)	O1–Mg1–O5	170.90(6)	O3–Mg1–O5	92.84(5)
O1–Mg1–O4	86.40(7)	O3–Mg1–O4	90.49(6)	O4–Mg1–O5	84.73(7)
O1–Mg1–O2#3	96.74(7)	O3–Mg1–O2#3	89.32(5)	O2#3–Mg1–O5	92.13(6)
O4–Mg1–O2#3	176.85(6)	O1–Mg1–O2	89.18(5)	O3–Mg1–O2	177.72(6)
O5–Mg1–O2	88.94(5)	O4–Mg1–O2	91.08(5)	O2–Mg1–O2#3	89.19(6)

symmetry codes: #3=–x, –y, –z

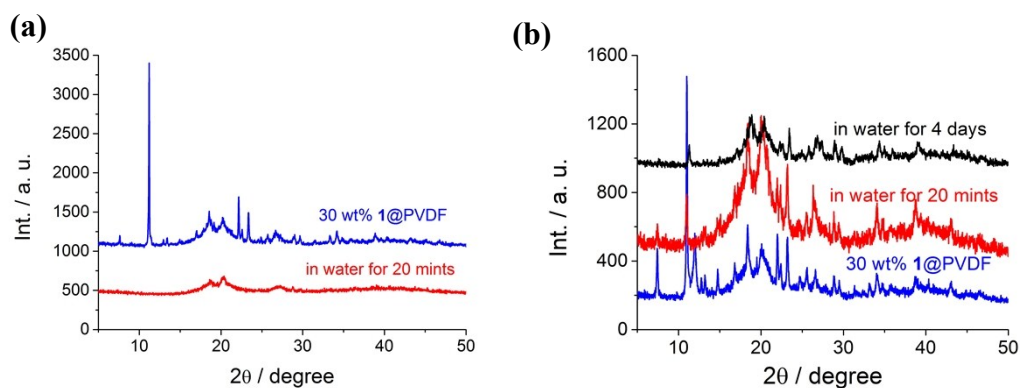
**Fig. S1** TG–MS curves for **1**.



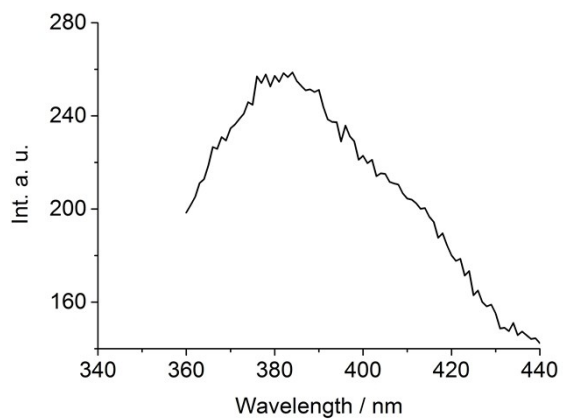
**Fig. S2** IR spectrum of (a) neat PVDF; (b) **1**; (c) 5 wt%; (d) 10 wt%; (e) 15 wt%; (f) 25 wt%; (g) 30 wt% **1**@PVDF respectively.



**Fig. S3** PXRD patterns of the samples of as-synthesized **1** pellet and that after exposure to humid air for 2 days.



**Fig. S4** PXRD patterns of 30 wt% **1**@PVDF composite before and after immersed in water: (a) the sample was not annealed and (b) the sample was annealed at 190 °C.



**Fig. S5** Emission spectrum of H<sub>3</sub>BTC in the solid state at room temperature.