

**Supramolecular salts assembled by melamine and two organic hydroxyl acids:
synthesis, structure, hydrogen bonds and luminescent property**

Fengcai Li ^a, Hao Xu ^a, Xinwei Xu ^a, Hui Cang* ^a, Jiaying Xu ^b, Song Chen* ^a

^a College of Chemistry and Chemical Engineering, Yancheng Institute of Technology, Yancheng 224000, PR China

^b State Key Laboratory of Coordination Chemistry, and School of Chemistry and Chemical Engineering, Nanjing University, Nanjing 210023, People's Republic of China

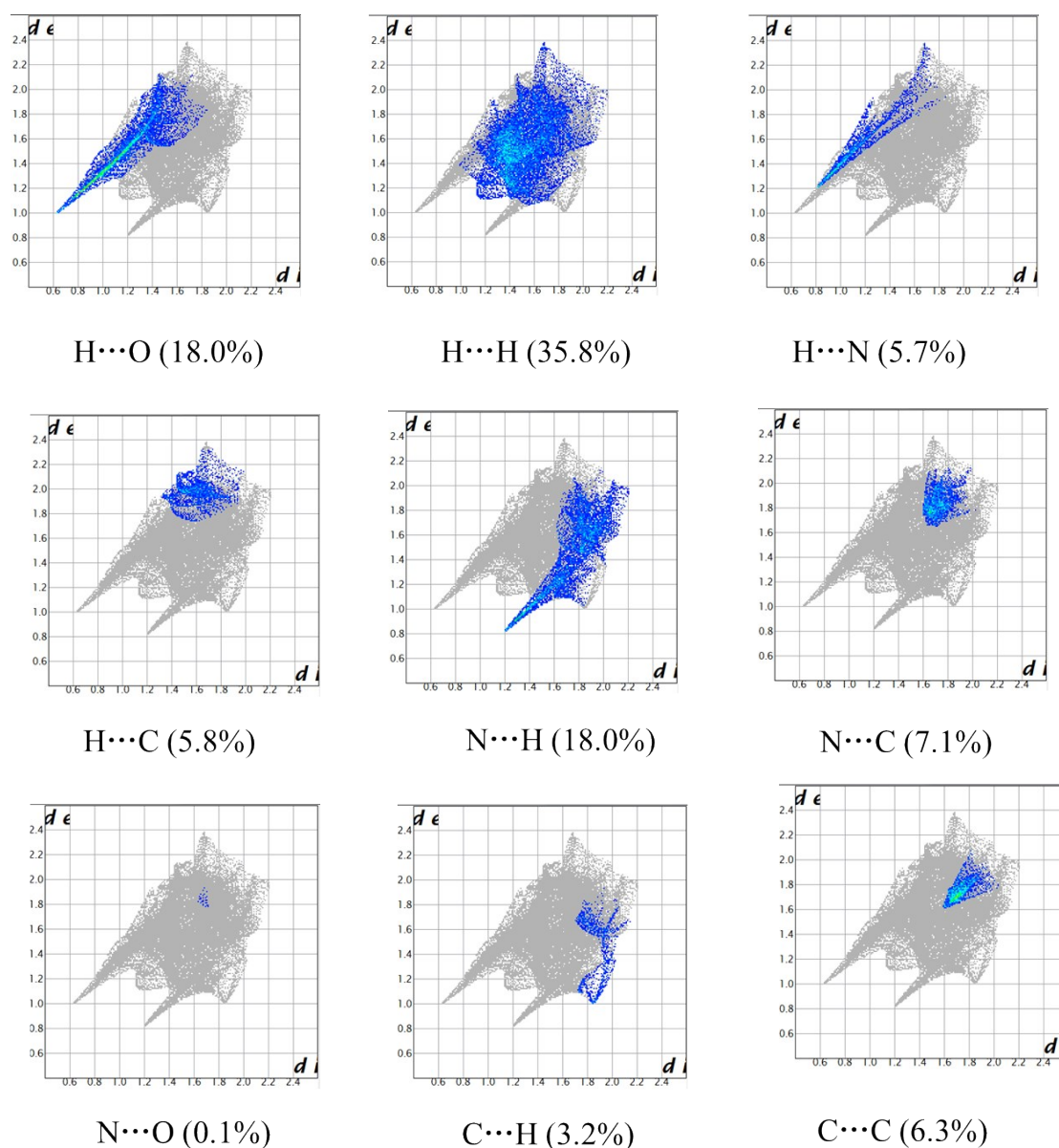


Fig S1. 2D fingerprint distribution of supramolecular salt I.

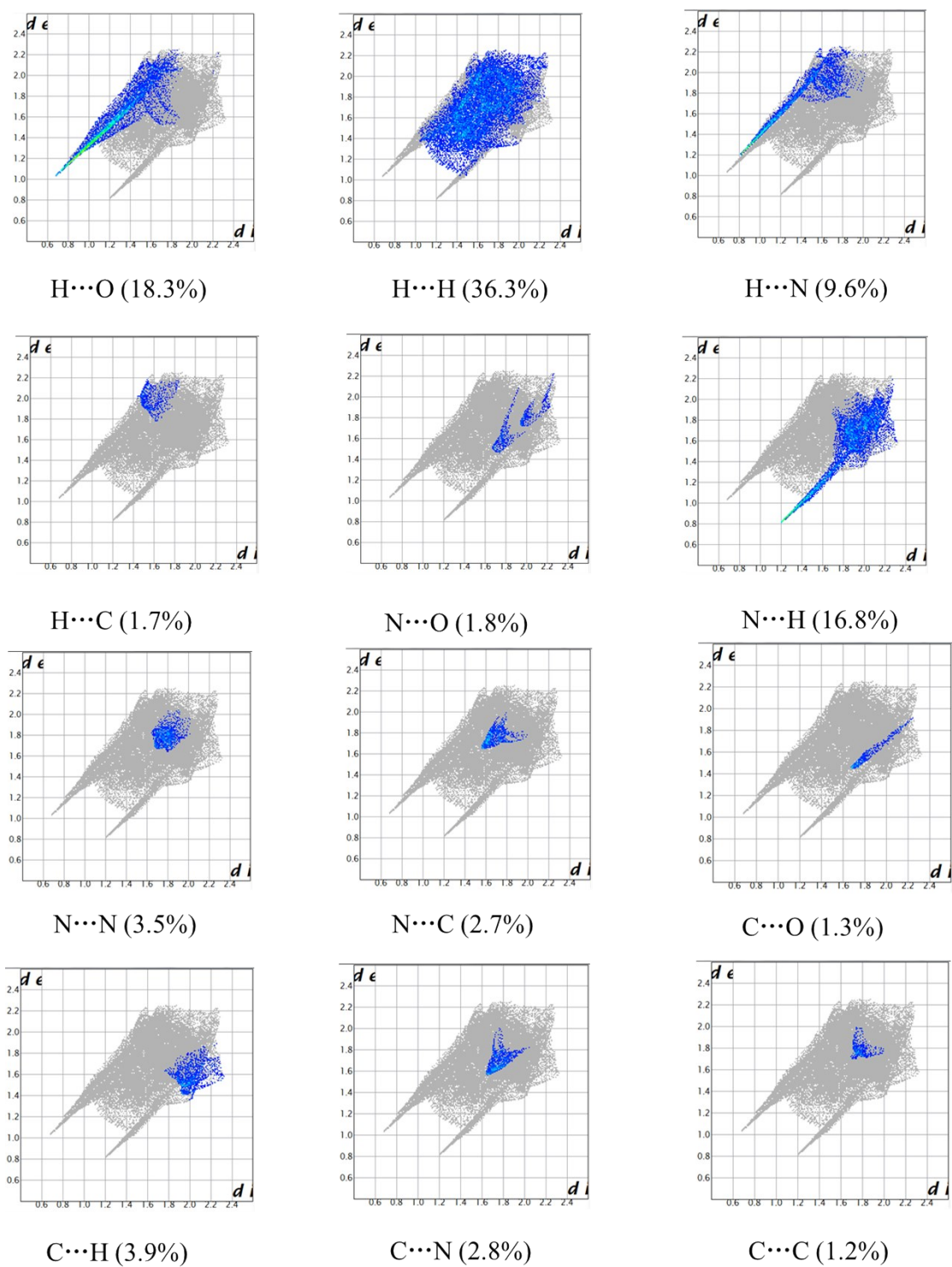


Fig S2. 2D fingerprint distribution of supramolecular salt II.

Table S1. Geometrical parameters (Bond length) and QTAIM topological parameters for bonds of interacting atoms in compound I; electron density (ρ), Laplacian electron density ($\nabla^2\rho$), electron kinetic energy density (G), electron potential energy density (V), total electron energy density (H) at bond critical point (BCP) and estimated energy of hydrogen bond (E_{HB}).

Bond type	Bond length(Å)	ρ (a.u.)	$\nabla^2\rho$ (a.u.)	G (a.u.)	V (a.u.)	H (a.u.)	E_{HB} (kJ·mol ⁻¹)
Structure 1							
O ₃ -H ₃ ···O ₂	2.606	0.008	0.029	0.006	-0.004	0.001	-5.595
N ₁ -H _{1B} ···O ₂	2.081	0.019	0.077	0.016	-0.014	0.003	-17.865
N ₃ -H _{3B} ···O ₁	1.761	0.041	0.161	0.040	-0.040	0.000	-52.987
N ₆ -H _{6B} ···O ₄	2.003	0.021	0.086	0.019	-0.015	0.003	-21.601
Structure 2							
N ₅ -H _{5A} ···N ₂	2.149	0.019	0.072	0.015	-0.012	0.003	-15.915
N ₁ -H _{1A} ···N ₄	2.307	0.014	0.047	0.010	-0.008	0.002	-9.934
N ₆ -H _{6A} ···O ₃	2.034	0.020	0.085	0.018	-0.015	0.003	-19.162

Table S2. Geometrical parameters (Bond length) and QTAIM topological parameters for bonds of interacting atoms in compound II; electron density (ρ), Laplacian electron density ($\nabla^2\rho$), electron kinetic energy density (G), electron potential energy density (V), total electron energy density (H) at bond critical point (BCP) and estimated energy of hydrogen bond (E_{HB}).

Bond type	Bond length(Å)	ρ (a.u.)	$\nabla^2\rho$ (a.u.)	G (a.u.)	V (a.u.)	H (a.u.)	E_{HB} (kJ·mol ⁻¹)
O ₁ -H ₁ ···O _{2i}	1.79	0.036	0.153	0.037	-0.035	0.001	-46.263
O ₄ -H _{4A} ···O ₃	1.892	0.028	0.113	0.026	-0.024	0.002	-31.180
N ₅ -H _{5A} ···O ₂	1.772	0.040	0.131	0.034	-0.035	-0.001	-46.307
N ₆ -H _{6B} ···O ₃	1.951	0.026	0.100	0.022	-0.020	0.003	-26.143
N ₁ -H _{1B} ···O ₁	2.066	0.019	0.077	0.016	-0.014	0.003	-17.939
N ₆ -H _{6A} ···N _{4ii}	2.141	0.019	0.071	0.015	-0.012	0.003	-15.887
N ₃ -H _{3B} ···N _{2ii}	2.163	0.018	0.067	0.014	-0.011	0.003	-14.796
N ₁ -H _{1A} ···O ₄	2.070	0.018	0.078	0.016	-0.013	0.003	-17.062
O ₄ -H _{4B} ···O _{1ii}	1.98	0.021	0.083	0.018	-0.015	0.003	-19.601