



STRUCTURAL  
CHEMISTRY

**Volume 72 (2016)**

**Supporting information for article:**

**Synthesis and characterization of four organic–inorganic salts:  
sulfates of 2-aminopyridinium derivatives**

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**Supplementary Table 1** Hydrogen-bond geometry (Å, °) for (I)

<i>D</i> —H... <i>A</i>	<i>D</i> —H	H... <i>A</i>	<i>D</i> ... <i>A</i>	<i>D</i> —H... <i>A</i>
O1—H1...O8 <sup>i</sup>	0.82	1.84	2.655 (5)	172.7
O1—H1...O7A <sup>i</sup> *	0.82	2.15	2.812 (17)	137.1
N21—H21...O2	0.86	2.01	2.764 (4)	145.3
N21—H21...O7A <sup>i</sup> *	0.86	2.38	3.040 (15)	133.8
O5—H5...O4	0.82	1.87	2.680 (4)	170.6
N22—H22A...O3	0.86	2.16	3.013 (4)	168.9
N22—H22B...O3 <sup>ii</sup>	0.86	2.23	2.897 (4)	134.2
N22—H22B...O23A	0.86	2.09	2.667 (4)	123.6
N11—H11...O6	0.86	2.25	2.998 (6)	145.4
N11—H11...O8A *	0.86	2.01	2.72 (2)	139.4
N12—H12A...O6	0.86	2.00	2.801 (5)	155.4
N12—H12B...O13A	0.86	2.17	2.721 (4)	121.8
N12—H12B...O7 <sup>iii</sup>	0.86	2.24	3.028 (5)	151.6
C25—H25...O8 <sup>iv</sup>	0.93	2.38	3.276 (5)	162.8
C25—H25...O8A <sup>iv</sup> *	0.93	2.42	3.316 (17)	162.7
C15—H15...O2 <sup>v</sup>	0.93	2.40	3.286 (4)	159.6
C26—H26...O13A <sup>vi</sup>	0.93	2.46	3.244 (4)	141.9
C16—H16...O23A <sup>ii</sup>	0.93	2.59	3.299 (4)	133.9

Symmetry codes: (i)  $x-1, y, z$ ; (ii)  $-x+1, -y+1, -z+2$ ; (iii)  $-x+2, -y+1, -z+1$ ; (iv)  $x-1, y+1, z$ ; (v)  $x, y-1, z$ ; (vi)  $-x+1, -y+1, -z+1$ .

\*minor part of disorder S2 anion

**Supplementary Table 2** Hydrogen-bond geometry (Å, °) for (II)

<i>D</i> —H... <i>A</i>	<i>D</i> —H	H... <i>A</i>	<i>D</i> ... <i>A</i>	<i>D</i> —H... <i>A</i>
N1—H1...O11	0.86	1.83	2.675 (2)	165.2
N2—H2A...O12	0.86	1.95	2.790 (2)	166.4
N2—H2B...O11 <sup>i</sup>	0.86	2.18	2.918 (2)	143.6
N2—H2B...O3A	0.86	2.42	2.918 (3)	117.1
C5—H5...O12 <sup>ii</sup>	0.93	2.26	3.168 (2)	165.7

Symmetry codes: (i)  $x, -y+1, z-1/2$ ; (ii)  $x+1/2, y+1/2, z$ .**Supplementary Table 3** Hydrogen-bond geometry (Å, °) for (III)

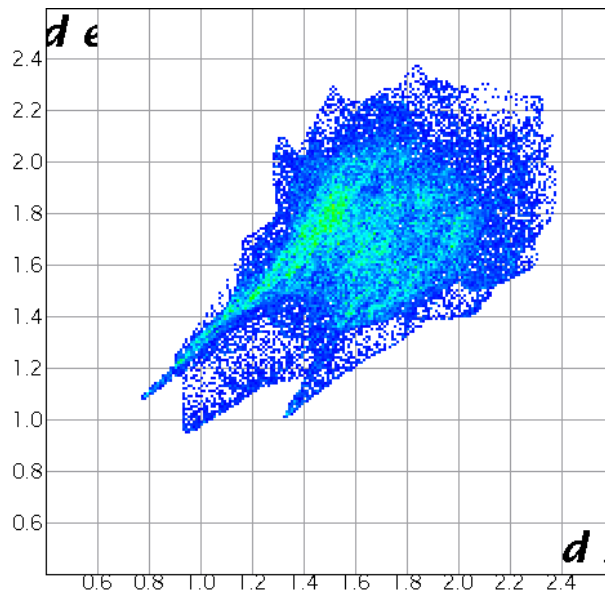
<i>D</i> —H... <i>A</i>	<i>D</i> —H	H... <i>A</i>	<i>D</i> ... <i>A</i>	<i>D</i> —H... <i>A</i>
O21—H21A...O14	0.82	1.77	2.575 (3)	168.2
O11—H11A...O24 <sup>i</sup>	0.82	1.80	2.607 (3)	169.0
N11—H11...O23	0.86	1.91	2.770 (3)	176.3
N21—H21...O13	0.86	2.01	2.829 (3)	158.6
N22—H22A...O12	0.86	2.07	2.924 (3)	173.6
N22—H22B...O22 <sup>ii</sup>	0.86	2.21	2.976 (3)	148.6
N12—H12A...O22	0.86	2.20	3.043 (3)	167.2
N12—H12B...O12 <sup>ii</sup>	0.86	2.10	2.906 (3)	155.2
C26—H26...O23 <sup>iii</sup>	0.93	2.36	3.249 (3)	159.3
C16—H16...O13 <sup>iii</sup>	0.93	2.52	3.437 (3)	170.0

Symmetry codes: (i)  $x+1, y, z$ ; (ii)  $-x+1, -y+1, -z$ ; (iii)  $-x+1, -y+1, -z+1$ .

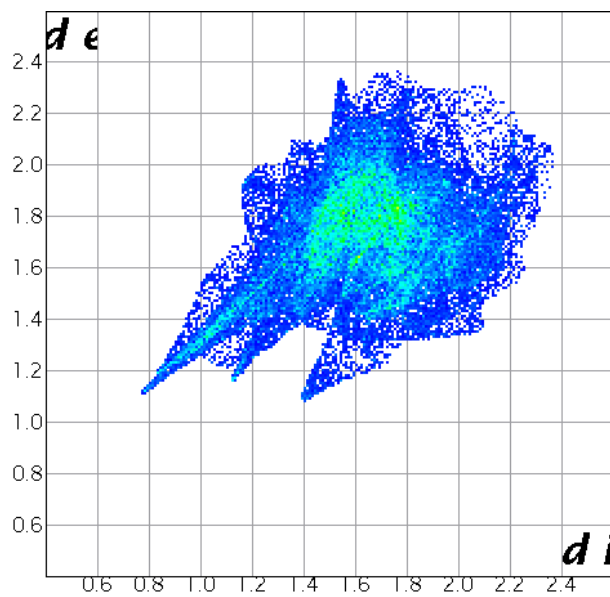
**Supplementary Table 4** Hydrogen-bond geometry (Å, °) for (IV)

<i>D</i> —H··· <i>A</i>	<i>D</i> —H	H··· <i>A</i>	<i>D</i> ··· <i>A</i>	<i>D</i> —H··· <i>A</i>
N21—H21···O1	0.86	1.82	2.677 (2)	171.8
N11—H11···O4	0.86	1.87	2.727 (3)	173.1
N22—H22A···O2	0.86	2.05	2.897 (3)	167.7
N22—H22B···O2 <sup>i</sup>	0.86	2.07	2.812 (2)	144.5
N12—H12A···O1	0.86	2.09	2.881 (2)	152.0
N12—H12B···O1W <sup>ii</sup>	0.86	2.06	2.890 (3)	162.1
C26—H26···O1 <sup>iii</sup>	0.93	2.57	3.127 (3)	119.2
O1W—H1WA···O4	0.78 (3)	2.07 (3)	2.824 (3)	161 (3)
O1W—H1WB···O3 <sup>iv</sup>	0.82 (3)	2.04 (3)	2.847 (3)	169 (3)

Symmetry codes: (i)  $-x+2, -y+1, -z+1$ ; (ii)  $-x+1, y+1/2, -z+1/2$ ; (iii)  $-x+1, -y+1, -z+1$ ; (iv)  $x, -y+1/2, z-1/2$ .

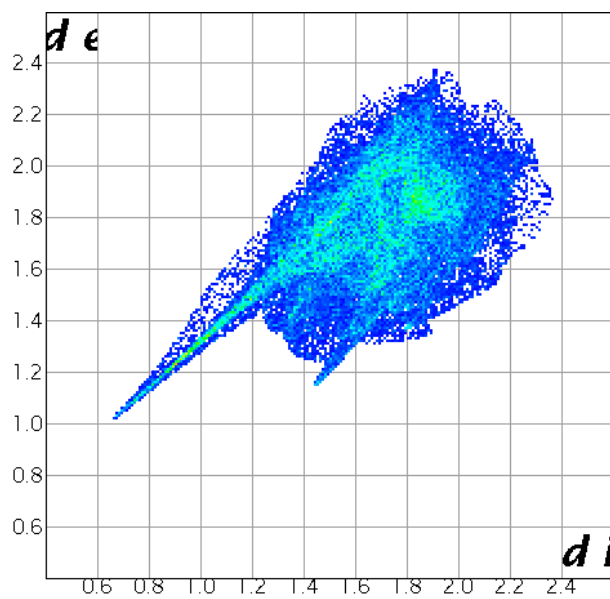
**Figure S1**

Two-dimensional fingerprint plots of first 2A4M3NP cation in compound I.



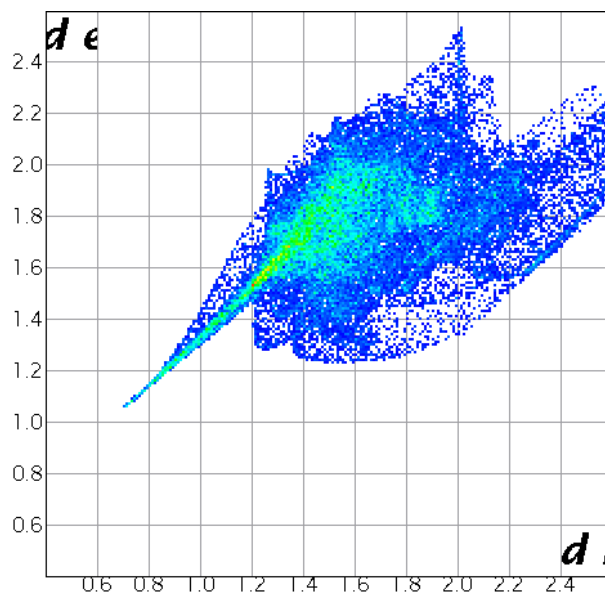
**Figure S2**

Two-dimensional fingerprint plots of second 2A4M3NP cation in compound **I**.



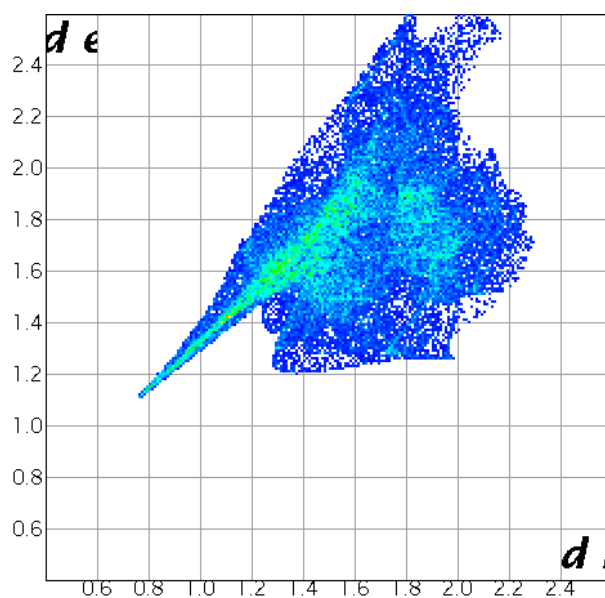
**Figure S3**

Two-dimensional fingerprint plots of 2A4M3NP cation in compound **II**.



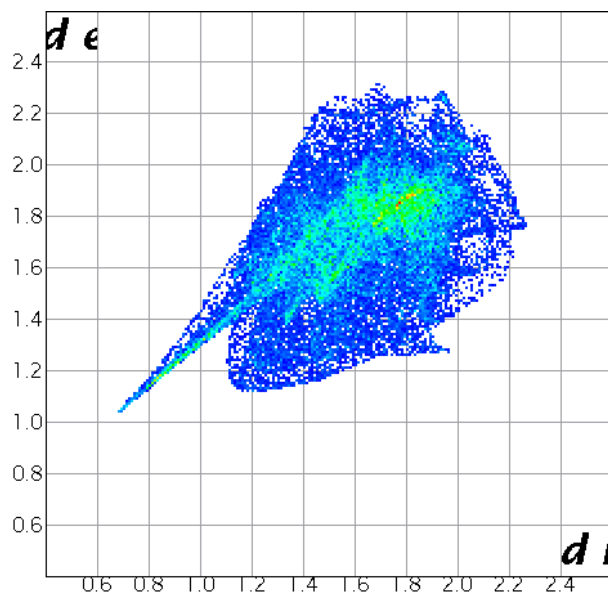
**Figure S4**

Two-dimensional fingerprint plots of first 2A3MP cation in compound **III**.



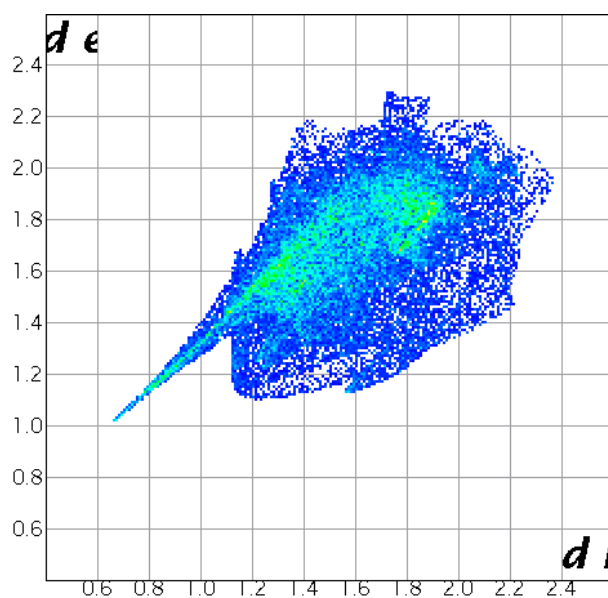
**Figure S5**

Two-dimensional fingerprint plots of second 2A3MP cation in compound **III**.



**Figure S6**

Two-dimensional fingerprint plots of first 2A3MP cation in compound IV.



**Figure S7**

Two-dimensional fingerprint plots of second 2A3MP cation in compound IV.