SUPPORTING INFORMATION

For

Layered ω-substituted alkylpyridinium salts with inorganic anions: effects of H-bonding pattern on the layer thickness

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Tab. S1 Monoclinic Solution for [2]Cl
a = 9.521(8) Å; *b* = 4.851(3) Å; *c* = 22.730(9) Å; Beta = 85.196(61)°; *V* = 1046.105 Å**3

Figure of Merit, M(15) = 24.2

hkl	*dobs*	*dcalc*	*2Th.obs*	*2Th.calc*
001	22.783	22.730	3.875	3.884
002	11.398	11.365	7.750	7.773
003	7.573	7.577	11.675	11.670
103	5.921	5.920	14.950	14.951
004	5.685	5.682	15.575	15.581
005	4.548	4.546	19.500	19.511
112	4.149	4.152	21.400	21.381
203	4.021	4.021	22.087	22.090
1-12	3.916	3.913	22.688	22.704
113	3.843	3.844	23.125	23.118
006	3.787	3.788	23.475	23.464
014	3.684	3.682	24.138	24.151
114	3.509	3.509	25.362	25.362
106		3.518		25.294
1-14	3.358	3.361	26.525	26.498
2-10	3.252	3.252	27.400	27.400

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Tab. S2 Triclinic Solution for $[2]_2[PdCl_4]$
a = 8.051(9) Å; *b* = 8.127(12) Å; *c* = 16.775(12) Å; Alpha = 82.60(4)°; Beta = 86.09(13)°; Gamma = 81.34(4)°; *V* = 1072.69 Å**3

Figure of Merit, M(14) = 24

hkl	*2Th.obs*	*2Th.calc*	*dobs*
001	5.319	5.324	16.600
002	10.650	10.660	8.300
010	11.050	11.084	8.000
100		11.122	
101	12.113	12.095	7.301
-101	12.587	12.575	7.027
012	14.488	14.442	6.109
110		14.550	
111	14.832	14.835	5.968
102	15.012	15.038	5.897
-110	16.825	16.823	5.265
1-11	17.896	17.894	4.952
013	18.386	18.380	4.821
103	19.086	19.078	4.646
-112	19.524	19.530	4.543
-103	19.996	19.998	4.437

TREOR imput file generated from Materials Studio
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Tab.S3 Triclinic Solution for $[2]_2[PdBr_4]$
a = 7.749(11) Å; *b* = 9.108(29) Å; *c* = 16.510(45) Å; Alpha = 97.08(6)°; Beta = 97.32(15)°; Gamma = 105.60(5)°; *V* = 1097.94 Å**3

Figure of Merit, M(9) = 153

hkl	*2Th.obs*	*2Th.calc*	*dobs*
001	5.469	5.467	16.146
002	10.950	10.947	8.073
010	12.025	12.019	7.354
0-11	12.350	12.343	7.161
100		12.366	
011	14.025	14.029	6.309
110	14.300	14.300	6.189
112	14.555	14.555	6.081
0-12	14.850	14.852	5.961

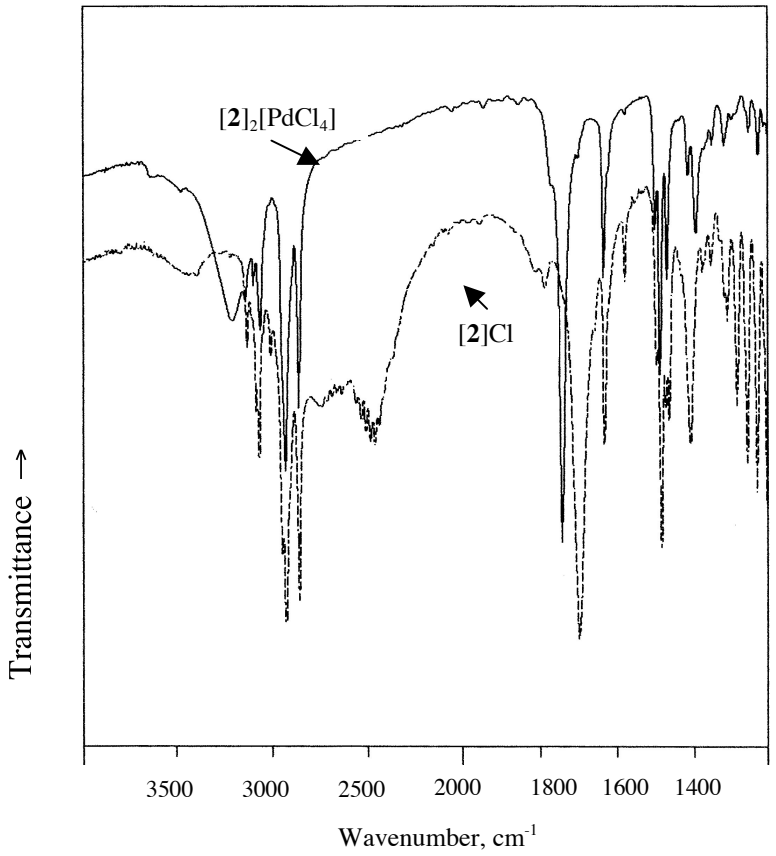

Figure S1. FT-IR spectra of [**2**]Cl (dotted line) and [**2**]$_2$[PdCl$_4$] (solid line).

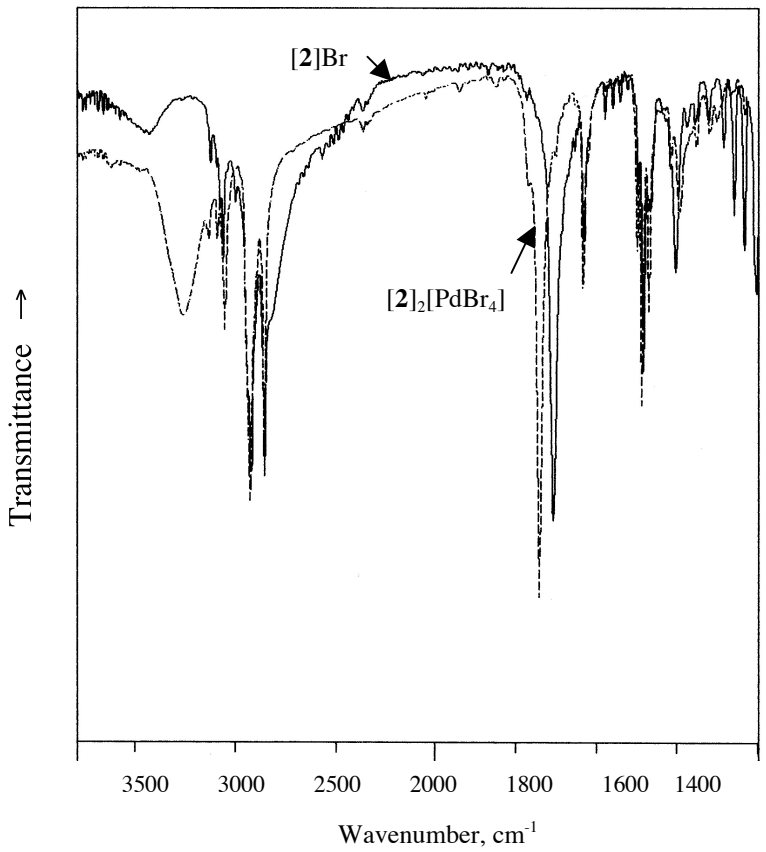

Figure S2. FT-IR spectra of [**2**]Br (solid line) and [**2**]$_2$[PdBr$_4$] (dotted line).