SUPPORTING INFORMATION

TABLE 1

Molality (m), enthalpies of dilution (ΔH_d), apparent (L_Φ) and partial molar (L_2) enthalpies of the 1,1′-didodecyl-2,2′-dimethylenebispyridinium dimethanesulfonate (12-Py(2)-2-(2)Py-12 MS), in water at 298 K (subscript *i* stands for initial and *f* for final state).

m_i (mol kg^{-1})	m_f (mol kg^{-1})	ΔH_d (J mol^{-1})	Φ_{Li} (J mol^{-1})	Φ_{Lf} (J mol^{-1})	L_{2i} (J mol^{-1})	L_{2f} (J mol^{-1})
0.00100	0.00052	-352	371	19	1353	257
0.00151	0.00078	-808	987	179	3126	772
0.00201	0.00104	-1308	1719	411	4040	1472
0.00230	0.00115	-1643	2172	529	3985	1816
0.00251	0.00125	-1632	2277	645	3885	2153
0.00271	0.00141	-1481	2330	849	2220	2736
0.00301	0.00156	-1241	2300	1059	1850	3329
0.00351	0.00184	-720	2215	1495	1450	4550
0.00402	0.00209	-215	2110	1900	1200	4025
0.00451	0.00226	108	1910	2020	910	4005
0.00507	0.00262	543	1750	2285	630	3850
0.00803	0.00395	799	1290	2120	30	1235
0.01505	0.00779	792	530	1320	-450	80
0.01976	0.01007	773	250	990	-715	-270
0.04054	0.02059	621	-395	220	-1215	-730
0.05027	0.02567	594	-595	0	-1425	-880
0.06016	0.03029	607	-755	-145	-1590	-1000
0.07048	0.03537	592	-870	-285	-1745	-1110
0.08043	0.04101	579	-990	-410	-1850	-1230
0.09058	0.04610	587	-1105	-530	-1925	-1340
0.10040	0.05065	586	-1185	-600	-2020	-1430
0.15509	0.07529	610	-1550	-940	-2115	-1800

TABLE 2

Molality (m), enthalpies of dilution (ΔH_d), apparent (L_Φ) and partial molar (L_2) enthalpies of the 1,1′-didodecyl-2,2′-trymethylenebispyridinium dimethanesulfonate (12-Py(2)-3-(2)Py-12 MS), in water at 298 K (subscript *i* stands for initial and *f* for final state).

m_i (mol kg^{-1})	m_f (mol kg^{-1})	ΔH_d (J mol^{-1})	Φ_{Li} (J mol^{-1})	Φ_{Lf} (J mol^{-1})	L_{2i} (J mol^{-1})	L_{2f} (J mol^{-1})
0.00050	0.00024	-204	395	137	980	329
0.00060	0.00028	-383	518	170	1290	412
0.00070	0.00033	-440	652	215	1629	526
0.00080	0.00039	-505	797	274	1994	675
0.00100	0.00050	-758	1115	380	2797	980
0.00150	0.00072	-1365	2059	681	5177	1700
0.00200	0.00095	-1090	2122	1032	860	2588
0.00301	0.00193	472	1648	2120	-300	1160
0.00401	0.00193	1147	973	2120	-825	1160
0.00451	0.00211	1297	818	2115	-1050	620
0.00602	0.00282	1523	338	1860	-1540	-200
0.00652	0.00308	1536	84	1620	-1685	-300
0.00752	0.00349	1550	-270	1280	-1925	-580
0.00802	0.00378	1529	-450	1080	-2025	-740
0.01003	0.00471	1441	-681	760	-2380	-1115
0.01203	0.00568	1337	-917	420	-2620	-1425
0.01403	0.00646	1316	-1280	70	-2820	-1680
0.01994	0.00946	1081	-1770	-660	-3160	-2300
0.02506	0.01182	1002	-2080	-1110	-3280	-2605
0.02808	0.01284	960	-2180	-1200	-3350	-2720
0.03511	0.01637	900	-2420	-1520	-3510	-3010
0.04010	0.01907	850	-2570	-1720	-3625	-3130
0.05013	0.02358	820	-2840	-2020	-3830	-3240
0.06013	0.02802	800	-2990	-2170	-4020	-3350
0.07017	0.03308	760	-3140	-2380	-4120	-3475
0.08024	0.03761	766	-3286	-2520	-4200	-3575
0.10027	0.04689	740	-3520	-2780	-4375	-3775
0.20055	0.09239	685	-4115	-3440	-4820	-4280

TABLE 3

Molality (m), enthalpies of dilution (ΔH_d), apparent (L_Φ) and partial molar (L_2) enthalpies of the 1,1′-didodecyl-2,2′-tetramethylenebispyridinium dimethanesulfonate (12-Py(2)-4-(2)Py-12 MS), in water at 298 K (subscript *i* stands for initial and *f* for final state).

m_i (mol kg^{-1})	m_f (mol kg^{-1})	ΔH_d (J mol^{-1})	Φ_{Li} (J mol^{-1})	Φ_{Lf} (J mol^{-1})	L_{2i} (J mol^{-1})	L_{2f} (J mol^{-1})
0.00050	0.00025	-322	477	153	1243	399
0.00078	0.00039	-570	949	314	2461	818
0.00080	0.00040	-681	1012	330	2625	858
0.00090	0.00044	-754	1216	388	3149	1011
0.00100	0.00051	-996	1444	485	3735	1261
0.00140	0.00072	-1455	2299	844	4300	2400
0.00151	0.00076	-1392	2330	938	4100	2450
0.00201	0.00100	-1118	2546	1427	2200	3700
0.00302	0.00144	379	1961	2340	290	4290
0.00401	0.00204	899	1641	2540	-190	2200
0.00451	0.00223	1034	1456	2490	-360	1700
0.00503	0.00249	1179	1221	2400	-490	800
0.00601	0.00294	1293	767	2060	-740	360
0.00697	0.00340	1291	529	1820	-910	60
0.00802	0.00398	1232	370	1600	-1080	-170
0.00903	0.00437	1222	268	1490	-1220	-300
0.01002	0.00483	1208	93	1300	-1320	-440
0.02008	0.00964	888	-708	180	-1890	-1280
0.02381	0.01171	828	-928	-100	-1960	-1500
0.03020	0.01492	744	-1143	-400	-2030	-1690
0.06023	0.02956	589	-1729	-1140	-2400	-2030
0.08028	0.03868	575	-1924	-1350	-2620	-2150
0.10048	0.04754	579	-2118	-1544	-2800	-2270
0.20047	0.08970	588	-2608	-2020	-3280	-2710

TABLE 4

Molality (m), enthalpies of dilution (ΔH_d), apparent (L_Φ) and partial molar (L_2) enthalpies of the 1,1′-didodecyl-2,2′-octamethylenebispyridinium dimethanesulfonate (12-8-12PybisMS), in water at 298 K (subscript *i* stands for initial and *f* for final state).

m_i (mol kg^{-1})	m_f (mol kg^{-1})	ΔH_d (J mol^{-1})	Φ_{Li} (J mol^{-1})	Φ_{Lf} (J mol^{-1})	L_{2i} (J mol^{-1})	L_{2f} (J mol^{-1})
0.00020	0.00010	-945.6	1902	957	2435	1904
0.00030	0.00015	-425.2	1855	1430	1270	2848
0.00040	0.00020	92.2	1810	1902	185	2435
0.00050	0.00024	640.4	1120	1760	-980	1940
0.00060	0.00029	1075.1	775	1850	-2325	1365
0.00070	0.00034	1661.3	189	1850	-3390	835
0.00080	0.00038	2177	-348	1830	-4320	410
0.00090	0.00043	2493.6	-804	1690	-5145	-150
0.00100	0.00048	2675.5	-1235	1440	-5925	-480
0.00200	0.00095	2825.2	-3840	-1015	-7150	-5530
0.00300	0.00143	2441.2	-5116	-2675	-7605	-6695
0.00401	0.00192	2043.7	-5813	-3770	-7930	-7025
0.00500	0.00238	1901.2	-6206	-4305	-8205	-7360
0.00602	0.00286	1708.7	-6673	-4965	-8430	-7555
0.00701	0.00333	1538.1	-6933	-5395	-8570	-7715
0.00901	0.00430	1320.5	-7265	-5945	-8755	-8020
0.01003	0.00499	1168.2	-7368	-6200	-8780	-8205
0.02002	0.01001	777.9	-8145	-7368	-9155	-8775
0.04007	0.01913	681.6	-8741	-8100	-9610	-9115
0.05010	0.02413	622.7	-8912	-8310	-9785	-9275
0.06006	0.02836	619.1	-9069	-8480	-9940	-9375
0.07029	0.03373	590.3	-9210	-8640	-10085	-9475
0.15128	0.07010	591.2	-9761	-9210	-10375	-10055
0.20459	0.09396	610.6	-9959	-9420	-10435	-10255
0.00020	0.00010	-945.6	1902	957	2435	1904
0.00030	0.00015	-425.2	1855	1430	1270	2848
0.00040	0.00020	92.2	1810	1902	185	2435

TABLE 5

Molality (m), enthalpies of dilution (ΔH_d), apparent (L_Φ) and partial molar (L_2) enthalpies of the 1,1′-didodecyl-2,2′-dodecamethylenebispyridinium dimethanesulfonate (12-Py(2)-12-(2)Py-12 MS), in water at 298 K (subscript *i* stands for initial and *f* for final state).

m_i (mol kg^{-1})	m_f (mol kg^{-1})	ΔH_d (J mol^{-1})	Φ_{Li} (J mol^{-1})	Φ_{Lf} (J mol^{-1})	L_{2i} (J mol^{-1})	L_{2f} (J mol^{-1})
0.00020	0.00010	2941	-5870	-2929	-10300	-5810
0.00030	0.00015	2960	-7960	-5000	-11100	-8752
0.00040	0.00020	2715	-8595	-5880	-11900	-10100
0.00050	0.00025	2500	-9410	-6910	-12300	-10700
0.00060	0.00029	2591	-10541	-7950	-12700	-10900
0.00070	0.00034	2619	-10919	-8300	-12800	-11800
0.00080	0.00039	2255	-10955	-8700	-12900	-11850
0.00085	0.00042	2393	-11193	-8800	-12950	-11950
0.00090	0.00044	2351	-11251	-8900	-13000	-12250
0.00100	0.00049	2570	-11970	-9400	-13300	-12280
0.00150	0.00072	1585	-12500	-10920	-13550	-12840
0.00200	0.00097	1904	-13244	-11340	-13900	-13250
0.00303	0.00147	1300	-13700	-12400	-14450	-13500
0.00400	0.00194	1284	-14284	-13000	-14800	-13850
0.00501	0.00248	1100	-14572	-13500	-15100	-14200
0.00601	0.00297	1070	-14760	-13690	-15500	-14430
0.00701	0.00347	940	-14940	-14000	-15700	-14600
0.00801	0.00393	960	-15160	-14200	-15900	-14790
0.00901	0.00451	883	-15280	-14400	-16050	-15000
0.00984	0.00493	880	-15440	-14560	-16150	-15080
0.02003	0.01006	666	-16126	-15460	-16980	-16170
0.04006	0.01983	569	-16659	-16090	-17550	-16880
0.06008	0.02852	562	-16987	-16425	-17770	-17380
0.08015	0.03778	555	-17180	-16625	-17900	-17530
0.15052	0.06705	557	-17627	-17070	-18380	-17820
0.21076	0.09155	583	-17863	-17280	-18760	-17970