

## Supporting Information

for

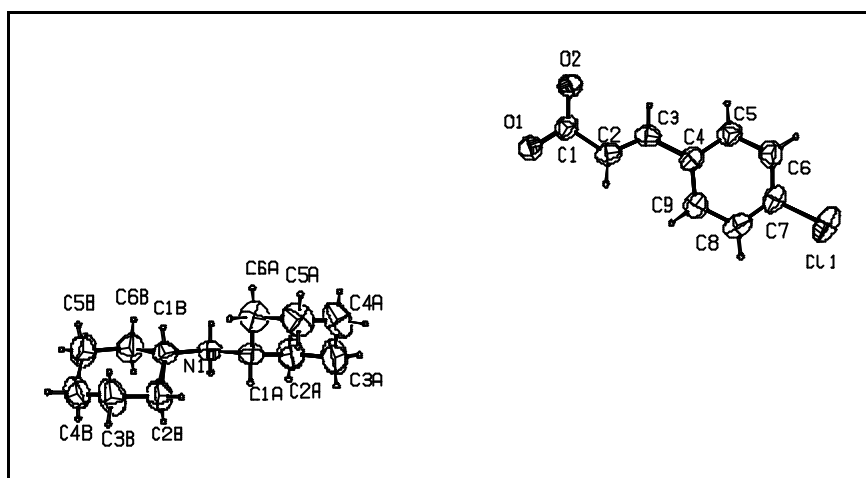
**Structure-Property Correlation of A New Family of Organogelators Based on Organic Salts and Their Selective Gelation of Oil from Oil/Water Mixtures**Darshak R. Trivedi, Amar Ballabh, Parthasarathi Dastidar\* and Bishwajit Ganguly\*  
Analytical Science Discipline, Central Salt & Marine Chemicals Research Institute, G. B. Marg,  
Bhavnagar – 364 002, Gujarat, India. Parthod123@rediffmail.com**FT-IR (KBr) data for:****3 (4-BrCIN):** 3433, 2935, 2855, 2807, 2755, 2725, 2693, 2629, 2594, 2521, 2421, 2359, 1641, 1549, 1489, 1457, 1423, 1400, 1384, 1312, 1248, 1178, 1150, 1070, 1053, 1033, 1010, 984, 970, 893, 825, 779, 726, 686, 654, 597, 559, 532, 493, 448 cm<sup>-1</sup>.**4 (3-BrCIN):** 3431, 2938, 2855, 2748, 2665, 2526, 2425, 1648, 1557, 1538, 1476, 1454, 1415, 1384, 1305, 1268, 1247, 1194, 1152, 1069, 986, 876, 848, 792, 747, 727, 680, 667, 590, 554, 493, 451, 435 cm<sup>-1</sup>.**5 (4-MeCIN):** 3428, 3050, 3022, 2936, 2853, 2798, 2727, 2671, 2533, 2442, 2368, 2223, 2115, 1915, 1740, 1642, 1512, 1462, 1452, 1412, 1383, 1366, 1312, 1290, 1251, 1212, 1183, 1157, 1118, 1086, 1069, 1056, 1037, 993, 965, 922, 886, 851, 821, 774, 746, 706, 642, 601, 560, 525, 495, 449, 427 cm<sup>-1</sup>.**6 (CIN):** 3422, 3056, 3026, 2939, 2854, 2804, 2750, 2671, 2522, 2421, 2354, 2222, 2116, 1641, 1557, 1525, 1494, 1450, 1383, 1369, 1313, 1293, 1249, 1189, 1157, 1087, 1070, 1032, 993, 981, 966, 917, 884, 846, 775, 720, 687, 601, 585, 561, 533, 491, 448, 426 cm<sup>-1</sup>.**8 (2-BrCIN):** 3449, 3036, 2932, 2857, 2789, 2725, 2674, 2523, 2440, 2208, 2103, 1980, 1635, 1536, 1488, 1466, 1437, 1376, 1310, 1279, 1254, 1234, 1161, 1085, 1063, 1021, 972, 924, 896, 881, 851, 794, 756, 731, 658, 591, 546, 492, 447, 407 cm<sup>-1</sup>.**9 (3-MeCIN):** 3412, 3055, 3027, 2938, 2920, 2854, 2747, 2722, 2671, 2528, 2441, 2344, 2224, 2119, 1798, 1641, 1601, 1530, 1451, 1424, 1381, 1367, 1313, 1266, 1253, 1221, 1191, 1158, 1088, 1068, 1053, 991, 962, 913, 881, 851, 794, 778, 739, 710, 685, 601, 555, 548, 519, 492, 449, 438 cm<sup>-1</sup>.**10 (2-MeCIN):** 3413, 3029, 2944, 2858, 2794, 2727, 2667, 2525, 2453, 2386, 2211, 2111, 1995, 1758, 1725, 1638, 1616, 1552, 1486, 1451, 1373, 1316, 1276, 1236, 1160, 1098, 1086, 1064, 1050, 1034, 977, 924, 882, 850, 787, 766, 739, 697, 600, 561, 522, 493, 449 cm<sup>-1</sup>.**11 (HyCIN):** 3454, 3061, 3027, 2941, 2857, 2797, 2756, 2674, 2575, 2523, 2475, 1944, 1861, 1800, 1624, 1553, 1496, 1451, 1401, 1312, 1265, 1238, 1162, 1143, 1068, 1053, 1033, 1003, 978, 938, 921, 898, 874, 847, 828, 787, 744, 700, 628, 597, 561, 492, 447 cm<sup>-1</sup>.**12 (4-CIBNZ):** 3026, 2938, 2856, 2705, 2670, 2528, 2575, 2448, 2401, 2219, 2114, 2004, 1929, 1867, 1806, 1625, 1589, 1551, 1482, 1451, 1379, 1349, 1315, 1273, 1244, 1160, 1135, 1087, 1064, 1048, 1035, 1014, 994, 976, 923, 896, 859, 824, 776, 716, 691, 629, 597, 557, 526, 494, 476, 465, 453, 422 cm<sup>-1</sup>.**13 (3-CIBNZ) :** 3547, 3417, 3029, 2940, 2857, 2795, 2724, 2671, 2524, 2469, 2444, 2396, 2217, 2113, 1998, 1948, 1878, 1824, 1627, 1546, 1450, 1416, 1374, 1314, 1263, 1145, 1067, 1033, 1001, 975, 920, 902, 860, 818, 789, 760, 729, 679, 656, 594, 565, 495, 451, 416 cm<sup>-1</sup>.**14 (2-CIBNZ) :** 3517, 3400, 3275, 3029, 2940, 2858, 2802, 2746, 2725, 2674, 2577, 2523, 2473, 2422, 2224, 2115, 1989, 1627, 1586, 1553, 1457, 1447, 1432, 1378, 1314, 1271, 1257, 1198, 1154, 1120, 1086, 1048, 1034, 994, 947, 924, 896, 874, 832, 806, 749, 707, 646, 599, 572, 553, 497, 459 cm<sup>-1</sup>.**15 (4-BrBNZ):** 3435, 3243, 3027, 2940, 2921, 2856, 2791, 2725, 2705, 2671, 2527, 2473, 2445, 2394, 2214, 2111, 1995, 1927, 1835, 1624, 1586, 1547, 1477, 1446, 1378, 1315, 1273, 1241, 1205, 1165, 1133, 1084, 1063, 1034, 1011, 975, 923, 898, 873, 859, 823, 772, 698, 685, 626, 595, 557, 529, 497, 472 cm<sup>-1</sup>.

**16 (3-BrBNZ):** 3416, 3032, 2943, 2858, 2721, 2672, 2524, 2468, 2394, 2218, 2114, 2000, 1627, 1542, 1495, 1451, 1372, 1313, 1263, 1160, 1135, 1063, 1033, 1002, 977, 921, 906, 874, 846, 823, 758, 709, 677, 649, 594, 563, 543, 496, 450, 415  $\text{cm}^{-1}$ .

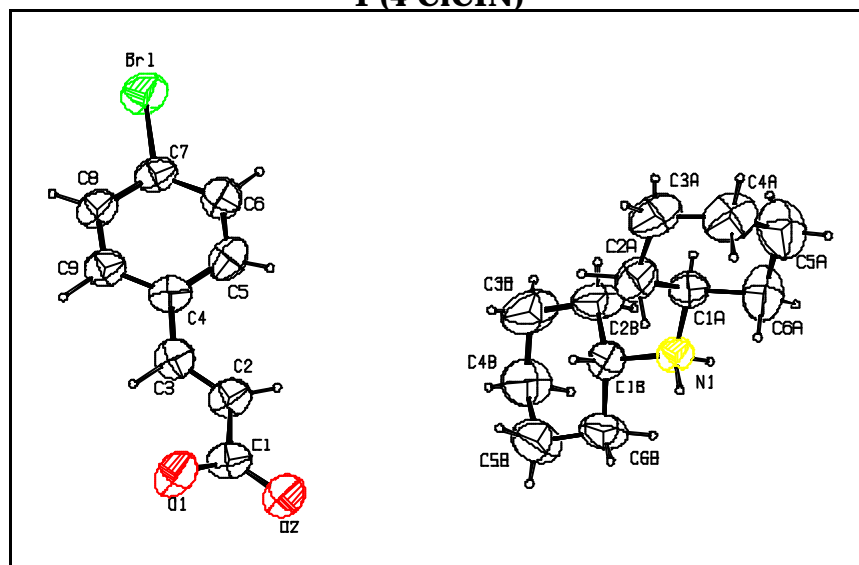
**17 (2-BrBNZ):** 3409, 3029, 2940, 2857, 2801, 2726, 2673, 2577, 2523, 2473, 2422, 2224, 2114, 1998, 1948, 1813, 1626, 1573, 1551, 1458, 1446, 1427, 1376, 1314, 1270, 1255, 1155, 1111, 1086, 1065, 1051, 1026, 994, 947, 924, 895, 874, 849, 829, 806, 746, 691, 641, 599, 569, 552, 496, 455, 422  $\text{cm}^{-1}$ .

**18 (BNZ):** 3471, 3417, 3060, 2939, 2858, 2798, 2725, 2669, 2598, 2521, 2471, 2447, 2395, 2215, 2113, 1752, 1625, 1542, 1503, 1453, 1379, 1350, 1313, 1268, 1170, 1137, 1086, 1065, 1051, 1025, 1005, 977, 923, 899, 875, 849, 827, 790, 724, 714, 671, 595, 562, 498, 451, 416  $\text{cm}^{-1}$

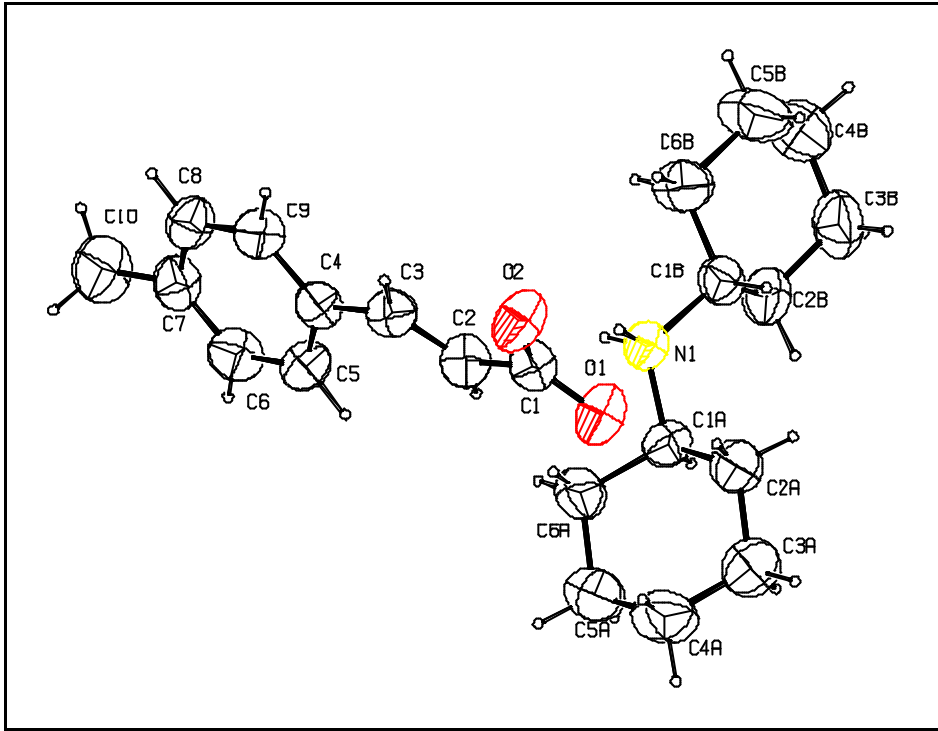
Followings are the ORTEP (50% probability) diagrams of the compounds with their numbers as given in the text. Only in case of 16, the probability is set at 30% and hydrogen atoms are not shown due to the shake of clarity.



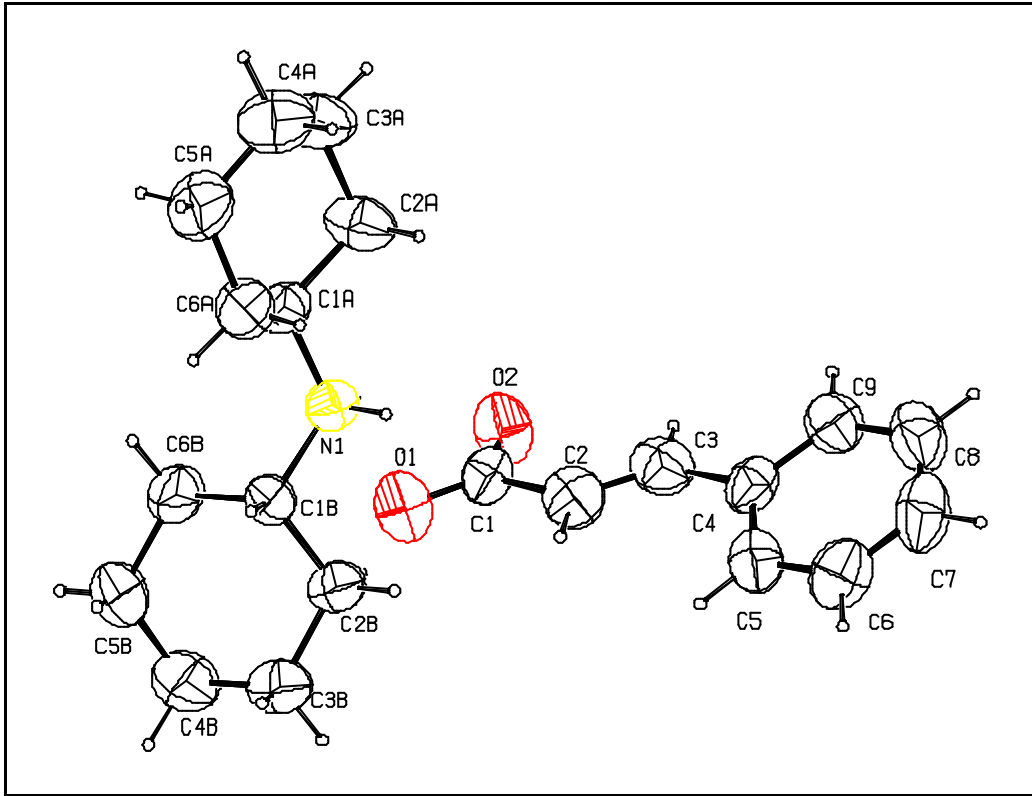
**1 (4-CICIN)**



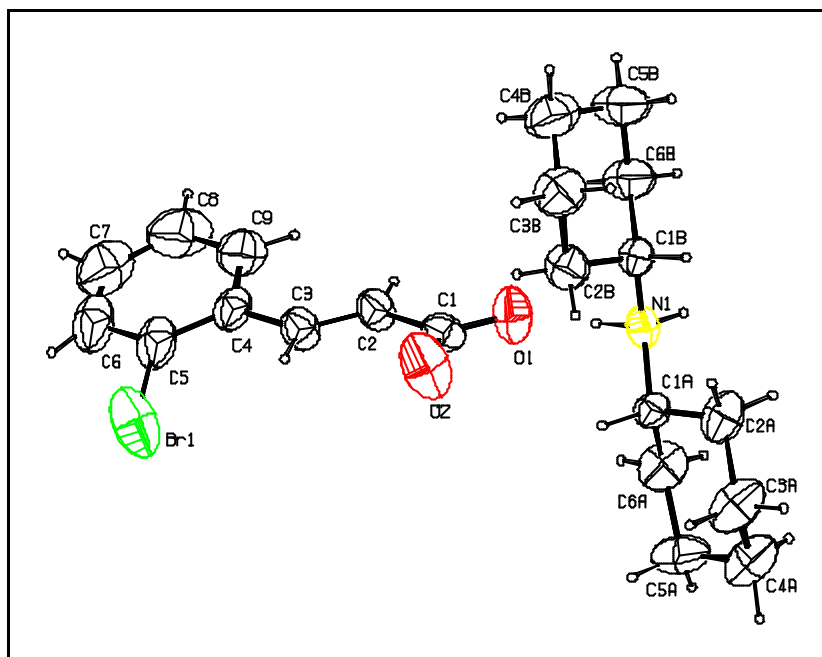
**3 (4-BrCIN)**



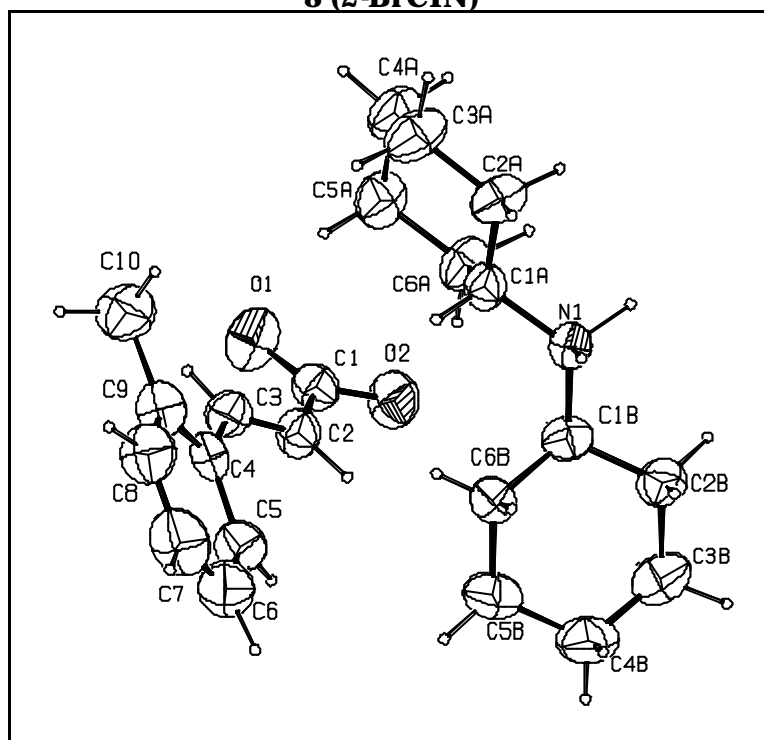
**5 (4-MeCIN)**



**6 (CIN)**

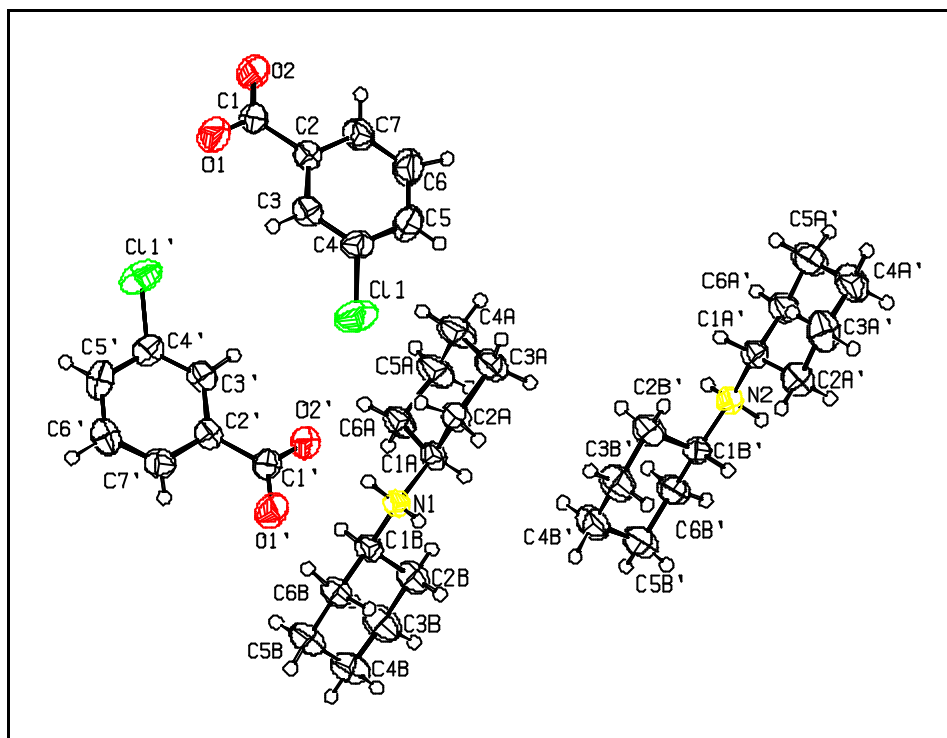


**8 (2-BrCIN)**

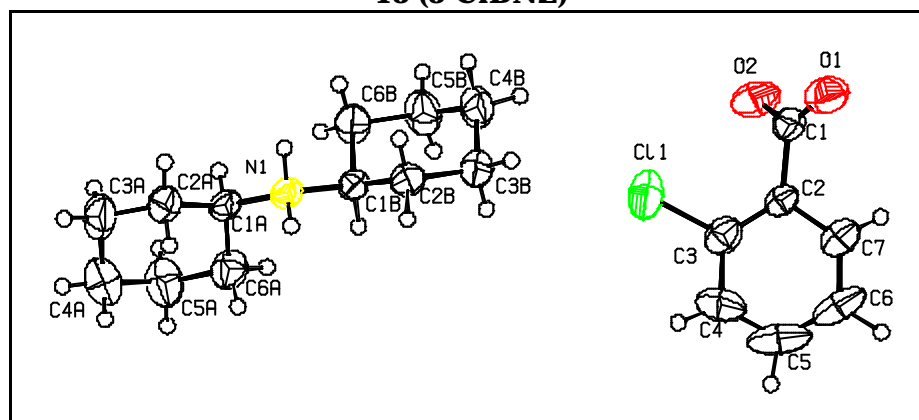


**10 (2-MeCIN)**

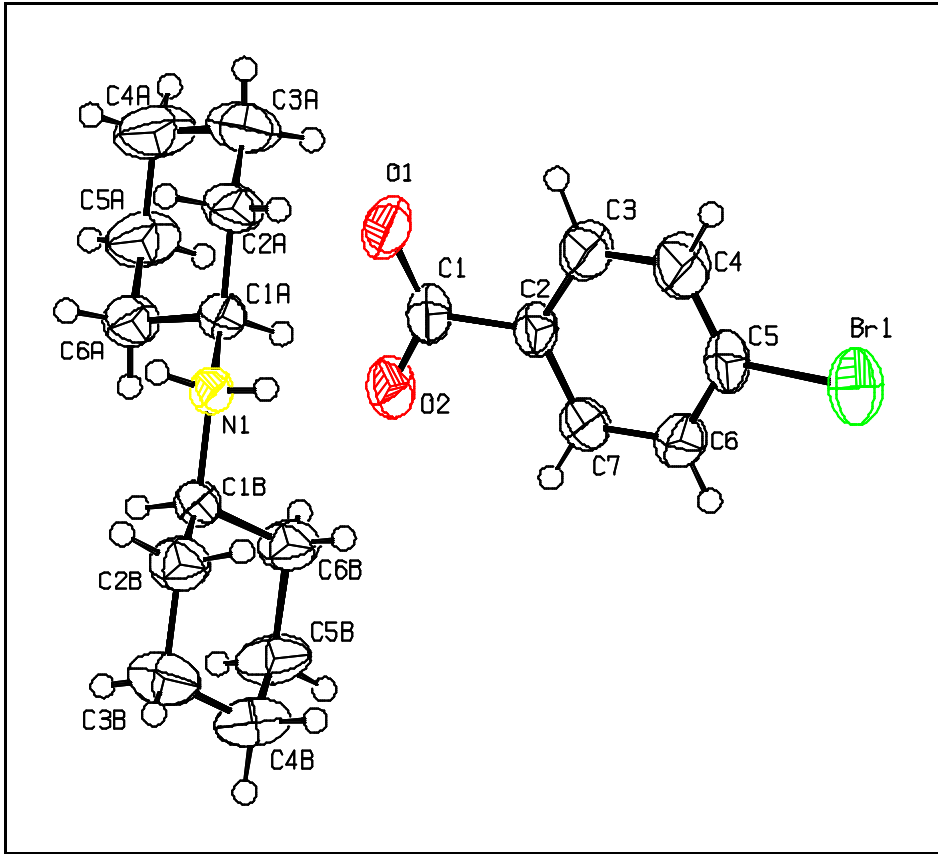




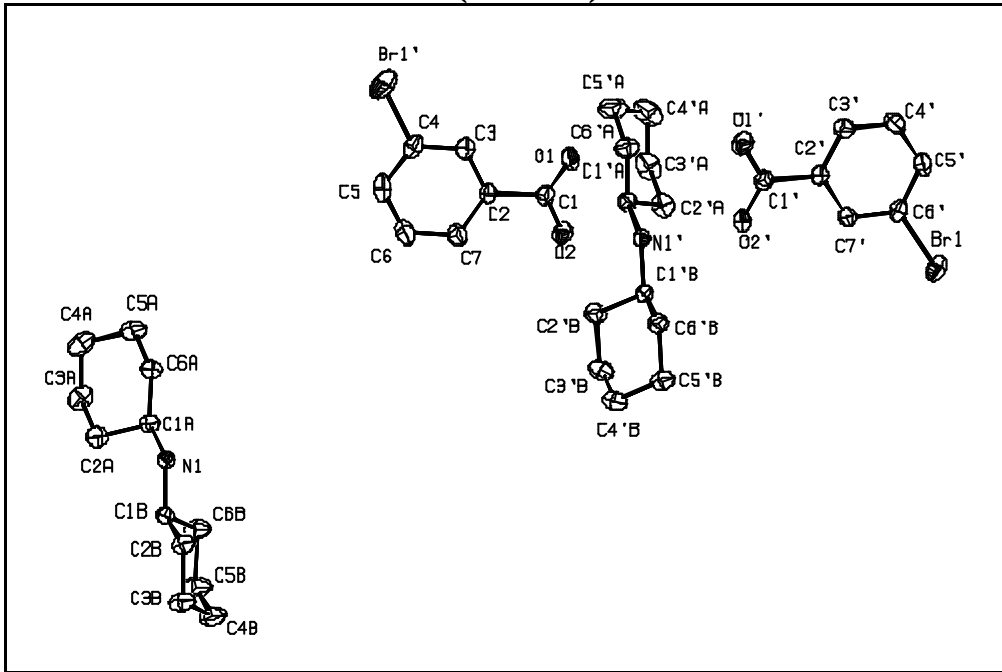
**13 (3-CIBNZ)**



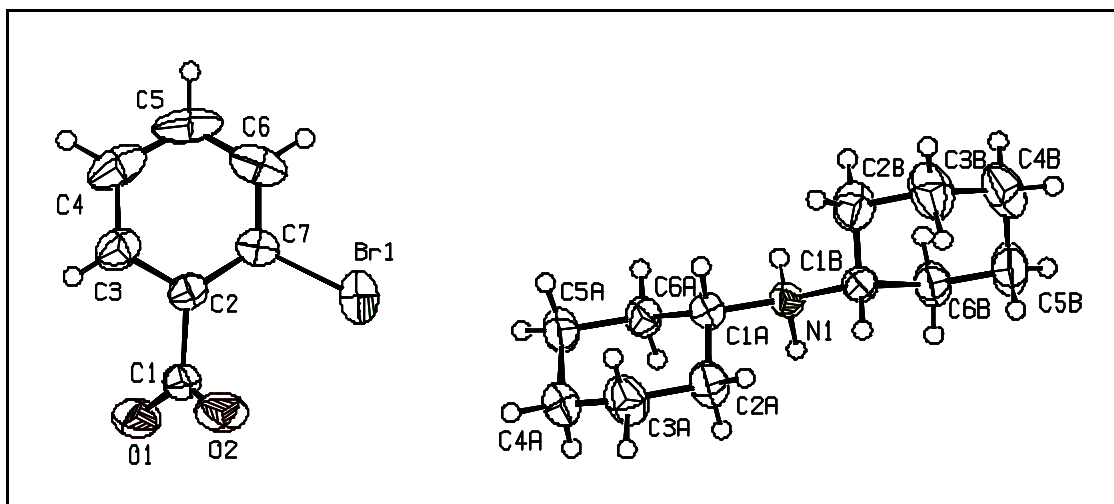
**14 (2-CIBNZ)**



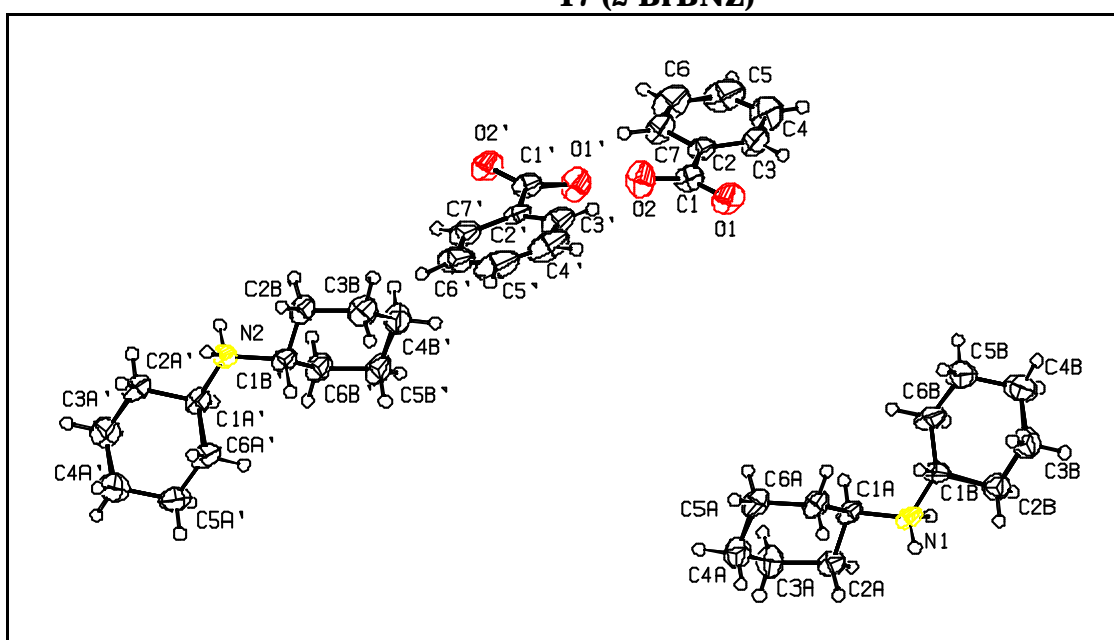
**15 (4BrBNZ)**



**16 (3-BrBNZ)**



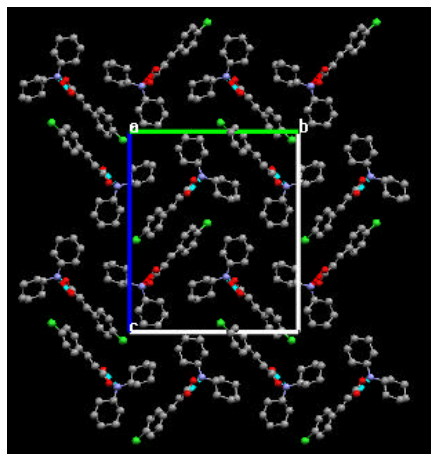
**17 (2-BrBNZ)**



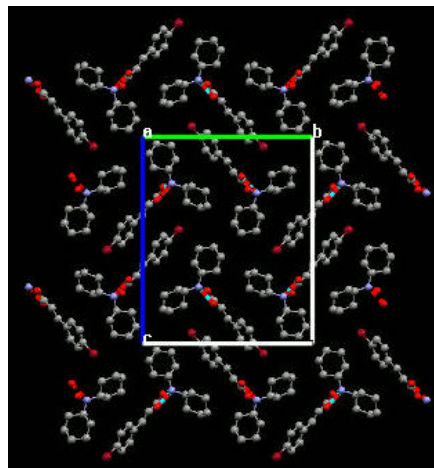
**18 (BNZ)**



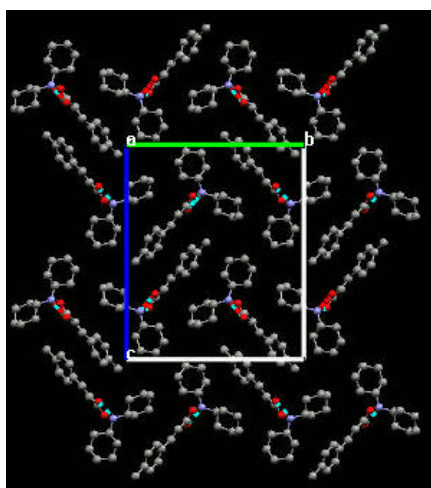
A)



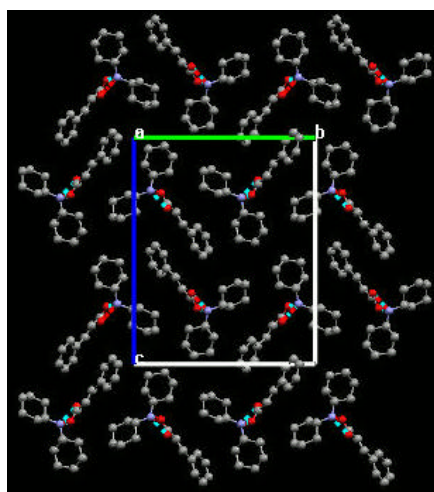
B)



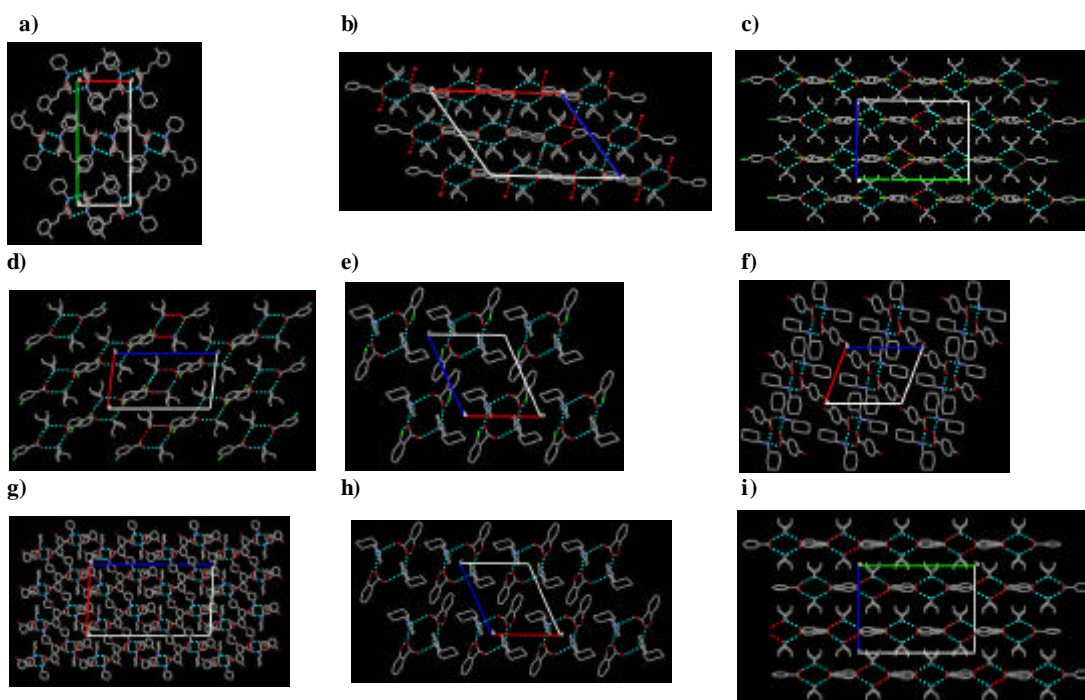
C)



D)



**S1:** Packing of the ion pairs in the crystal structures of the gelators **1**, **3**, **5** and **6**. A) for **1** (4-CICIN), B) for **3** (4-BrCIN), C) for **5** (4-MeCIN) and D) for **6** (CIN)



**S2:** Packing of the nongelators **10-18** in their crystal structures. a) for **10** (2-MeCIN), b) **11** (HyCIN), c) for **12** (4-CIBNZ), d) for **13** (3-CIBNZ), e) for **14** (2-CIBNZ), f) for **15** (4-BrBNZ), g) **16** (3-BrBNZ), h) for **17** (2-BrBNZ) and i) for **18** (BNZ)