

Figure 1S SERS of Maltose thin film on electrochemically roughened Au electrode. Excitation 632.8 nm, the feature marked * does not appear in the solution or solid Raman spectrum of maltose.

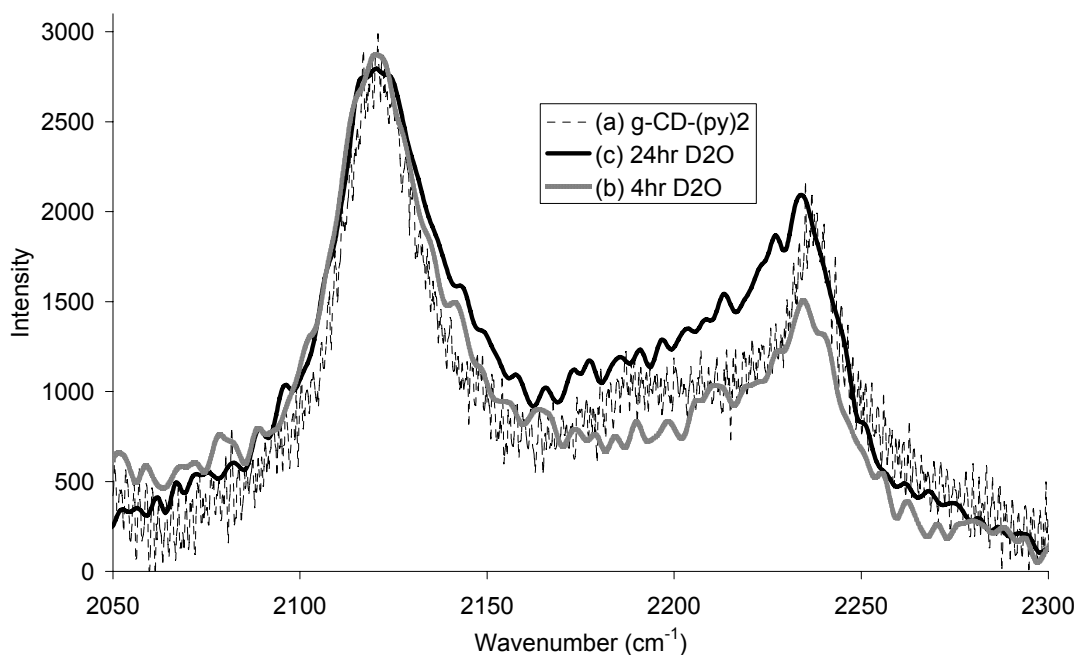


Figure 2S SERS of (a) γ -CD-(Py)₂ after 24 hr formation (on electrochemically roughened Au electrode). (b) γ -CD-(Py)₂ monolayer after 4 hr exposure to D₂O and (c) 24 hr exposure to D₂O. Excitation 632.8 nm

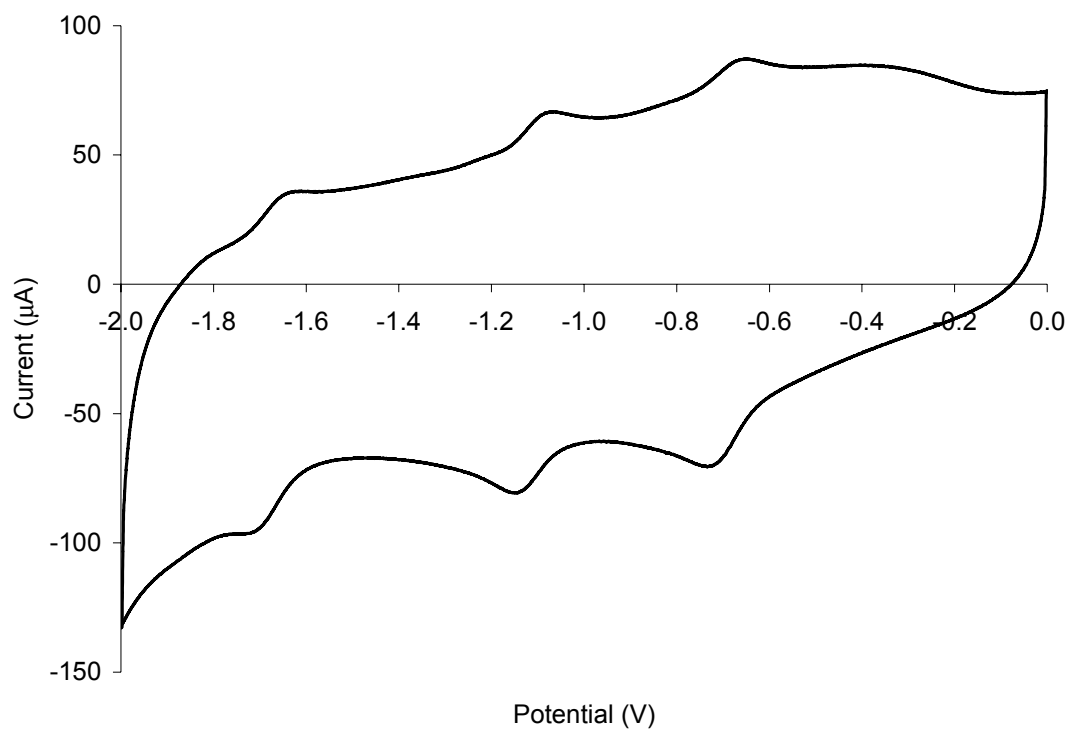


Figure 3S Cyclic voltammetry of solution phase $[\gamma\text{-CD}]_2\text{:C}_{60}$ in DMF, with 0.2 M LiClO_4 electrolyte, glassy carbon working electrode, Ag/Ag^+ reference and Pt wire auxiliary electrode. Scan rate = 0.5 V/s.

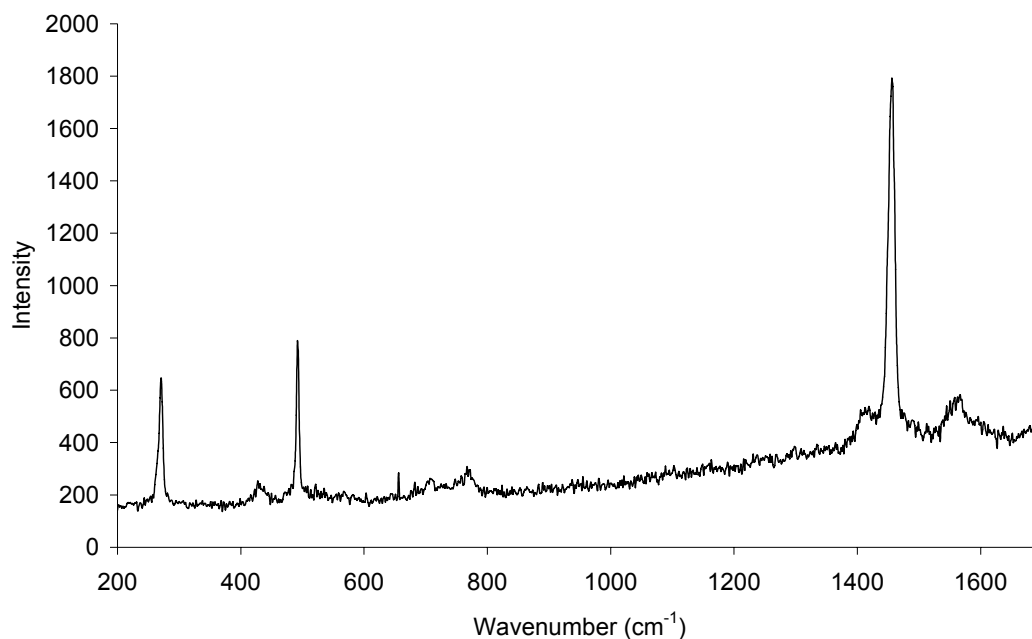


Figure 4S Raman of C₆₀ solid showing photopolymerisation using 488 nm excitation

	Layer (cm ⁻¹)	Bilayer (Backfilled γ -CD-(py) ₂) (cm ⁻¹)	Layer containing C ₆₀ (cm ⁻¹)
Nonanethiol	381, 467, 484, 595, 680 (S) 695, 748, 834 (S), 850, 926, 954 (S), 1006 (S), 1034, 1107 (S), 1121, 1135, 1141, 1162, 1197 (S), 1212, 1277, 1308, 1342 (S), 1362, 1411, 1432, 1453, 1496, 1517, 1532, 1893, 2289, 2495, 2683, 2865-2945.	337, 467, 482, 592, 677 (S), 691, 746, 831 (S), 848, 921, 952 (S), 1104, 1033, 1105, 1120, 1139, 1160, 1195 (S), 1211, 1273, 1305, 1338 (S), 1359, 1371, 1411, 1428, 1452 (S), 1493, 1888, 2284, 2497, 2647, 2674, 2721, 2865 - 2945.	456, 492, 598, 683, 749, 837, 854, 926, 956, 1010, 1025, 1109, 1124, 1139, 1142, 1165, 1195, 1218, 1277, 1308, 1340, 1363, 1375, 1417, 1496, 1518, 1531, 1894, 2290, 2489, 2679-3020
Pyridine	634, 1022, 1071, 1214, 1609	637, 1032, 1073, 1210, 1607.	1035, 1063, 1219, 1607.
CD	293, 395, 980, 1342, 1381, 1434, 1486, 1541, 2133, 2242, 2862 - 3128.	273, 298, 381, 970, 986, 1495, 1528, 1632, 2832 - 3117	261, 278, 293, 346, 383, 494, 651, 715, 894, 1063, 1187, 1230 , 1488, 1566 , 1637, 2766, 2700 - 3370.
C ₆₀	271, 1456		492, 1470

Table S1. List of list of major bands in the spectra in Figure 4 which can be assigned to the various species: pyridine, CD, nonanethiol, and C₆₀. Vibrations in bold are new bands associated with inclusion of C₆₀ into the monolayer.