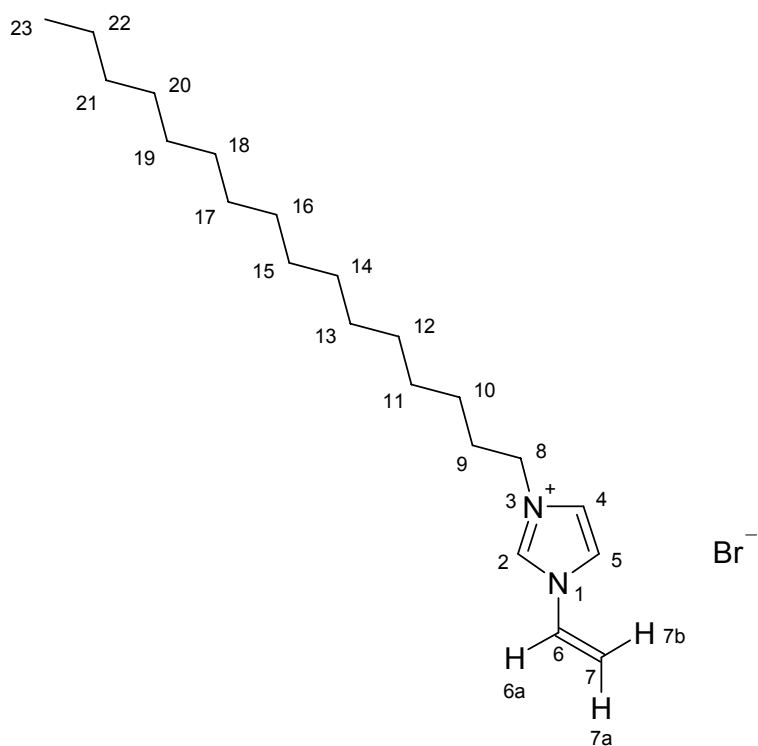


Electronic Supporting Information



Scheme 1. hvimBr {mp 69.8-70.6 °C consistent with published value [C. Damas, S. Baggio, A. Brembilla and P. Lochon, *Eur. Polym. J.*, 1997, **33**, 1219-1224]}

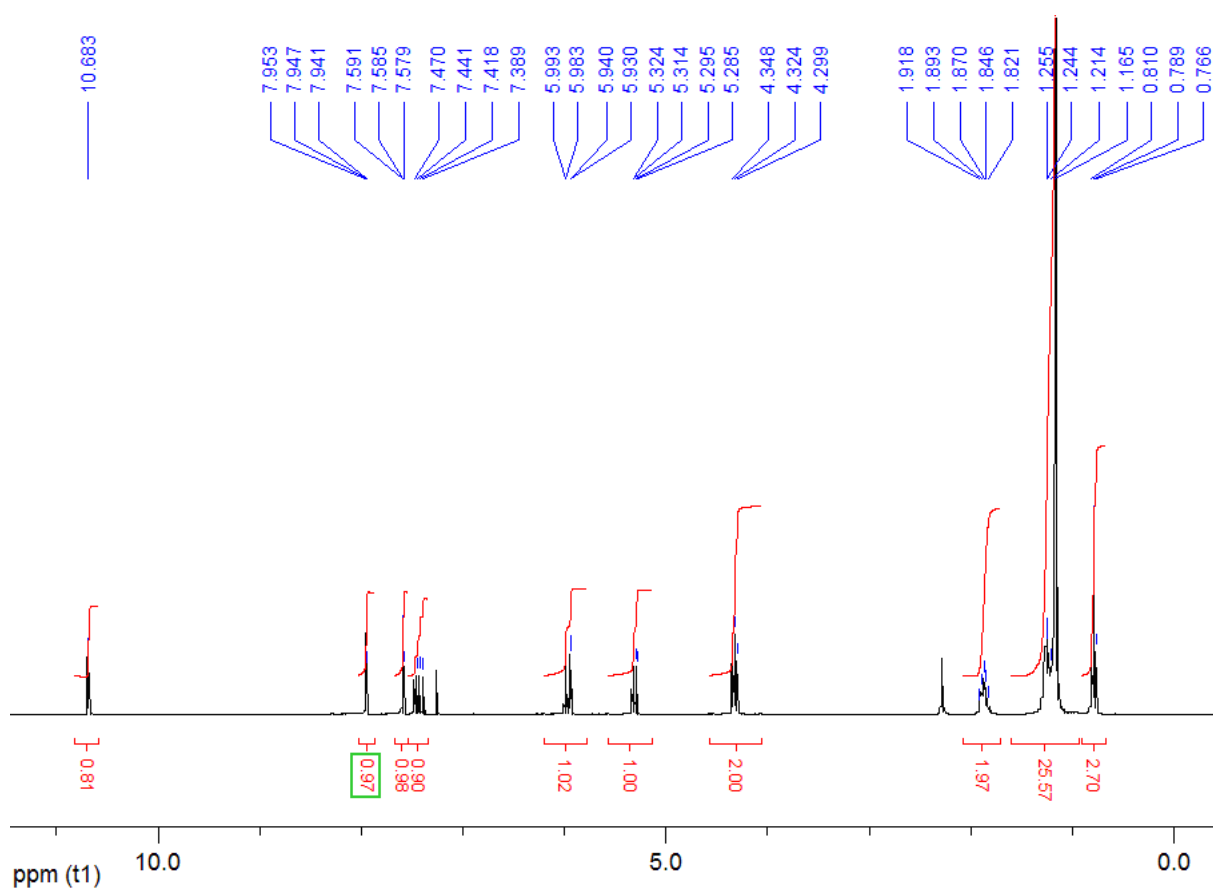


Figure S1. ^1H NMR spectrum of hvimBr.

^1H -NMR, δ_{H} (300 MHz; CDCl_3): 0.79 (3 H, t, $J_{22,23}$ 6.3 Hz, 23-H), 1.16 to 1.26 (26 H, m, 10-H to 22-H), 1.87 (2 H, quintet, $J_{\text{H8-H9}} = J_{\text{H9-H10}}$ 7.2 Hz, 9-H), 4.32 (2 H, t, $J_{\text{H8-H9}}$ 7.2 Hz, 8-H), 5.30 (1 H, dd, $J_{\text{H6a-H7a}}$ 8.7 Hz, $J_{\text{H7a-H7b}}$ 3.0 Hz, 7a-H), 5.96 (1 H, dd, $J_{\text{H6a-H7b}}$ 15.6 Hz, $J_{\text{H7a-H7b}}$ 3.0 Hz, 7b-H), 7.43 (1 H, dd, $J_{\text{H6a-H7b}}$ 15.6 Hz, $J_{\text{H6a-H7a}}$ 8.7 Hz, 6a-H), 7.58 (1 H, br dd, 5-H), 7.95 (1 H, br dd, 4-H), 10.68 (1 H, br s, 2-H).

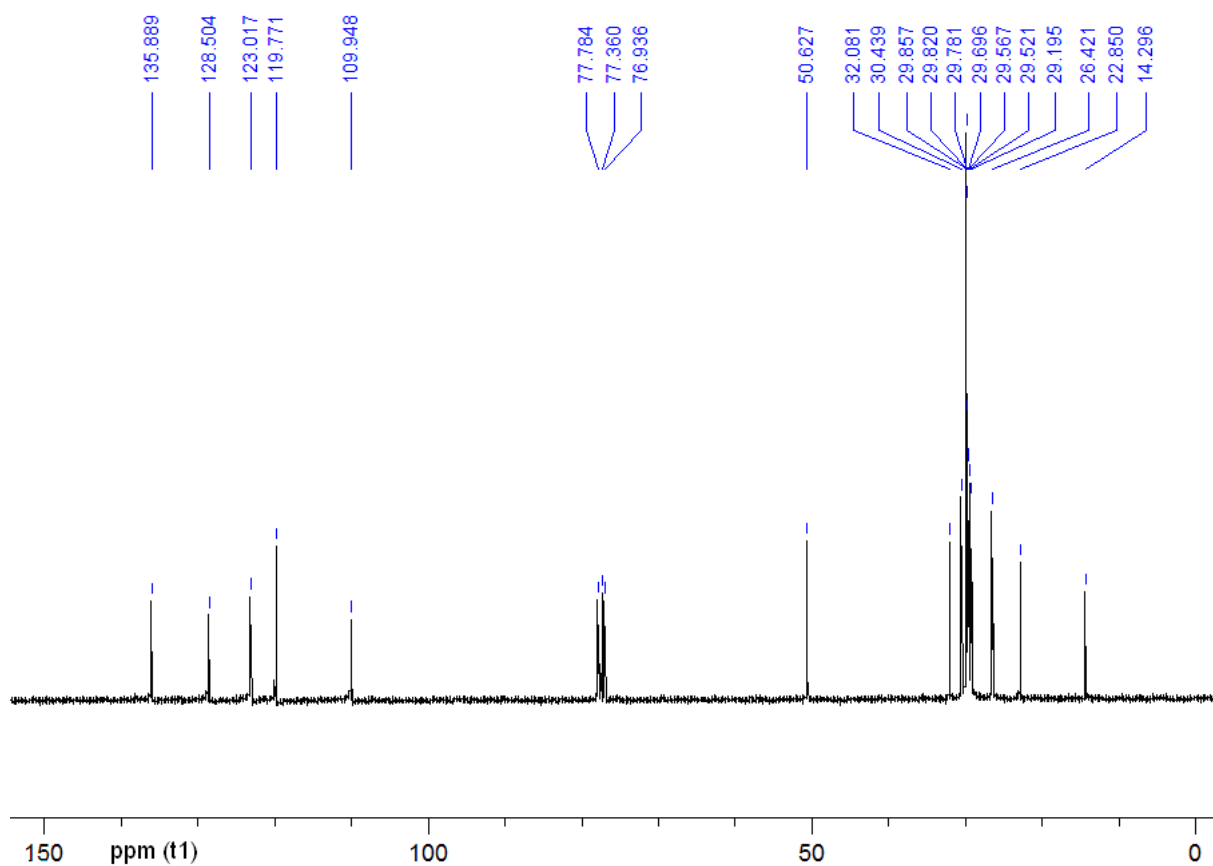


Figure S2. ^{13}C NMR spectrum of hvimBr.

^{13}C -NMR, δ_{C} (75 MHz, CDCl_3): 14.3 (C-23), 22.8 to 32.1 (C-9 to C-22), 50.6 (C-8), 110.0 (C-7), 119.8 (C-5), 123.0 (C-4), 128.5 (C-2), 135.9 (C-6).

Fluorimetric determination of the CMC of hvimBr

Steady-state emission spectra were recorded at 39 °C on a Jasco FP-6200 spectrofluorimeter, with a band-pass of 5 nm and an excitation λ 550 nm. The temperature was chosen in order to avoid hvimBr precipitation. The concentration of the fluorescent probe Nile Red (9-diethylamino-5*H*-benzo[α]phenoxazin-5-one) was kept constant (5.0×10^{-7} M) in all measurements. On increasing the concentration of hvimBr from 6.00×10^{-4} to 0.60 mg mL^{-1} (1.50×10^{-6} - 1.50×10^{-3} M), fluorescence emission remained very low up to a critical micelle concentration (CMC). The formation of aggregates from hvimBr, into which Nile Red preferentially solubilizes, was confirmed also by the blue shift of the λ_{max} of Nile Red observed above the CMC.

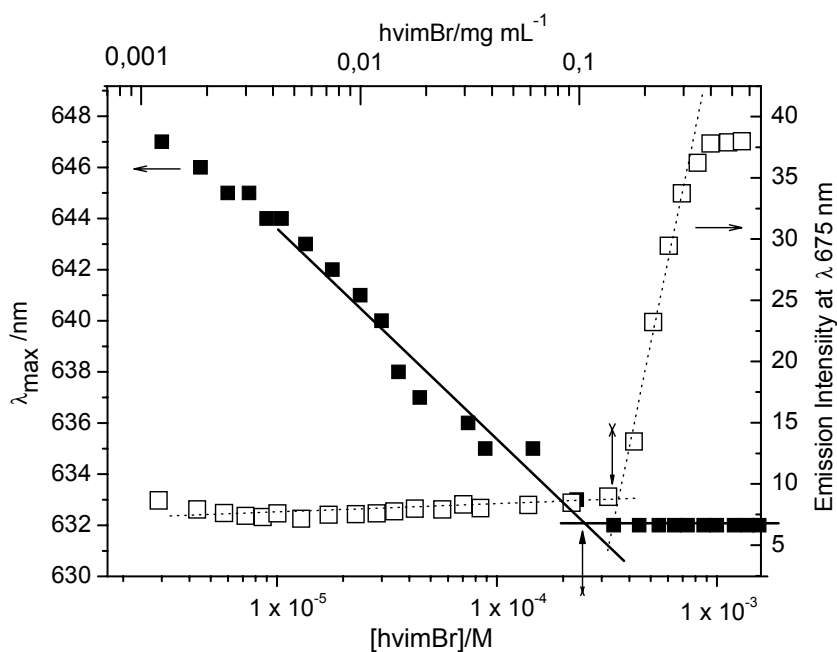


Fig. S3 Fluorimetric determination of the CMC of hvimBr by monitoring the λ_{max} shift (left ordinate) and the change in intensity at λ 675 nm (right ordinate) of the fluorescence probe Nile Red.

Conductimetric determination of the CMC of hvimBr

Conductivity measurements were carried out with a CRISON Basic 30 apparatus, with a cell constant of 1 cm^{-1} calibrated with a KCl solution of known concentration. The temperature was kept constant at 39°C . The range of hvimBr concentration investigated was from 1.00×10^{-2} to 0.40 mg mL^{-1} ($2.5 \times 10^{-5} - 1 \times 10^{-3} \text{ M}$). The CMC value was calculated by the Williams method from a plot of specific conductivity *versus* molar concentration. The CMC corresponds to the intersection point of the two straight lines referring to the conductivity of monomer aqueous solutions (at low surfactant concentrations) and to the conductivity of micellar solutions (at high surfactant concentrations), respectively. The suspension was stirred in order to favour equilibration before each measurement.

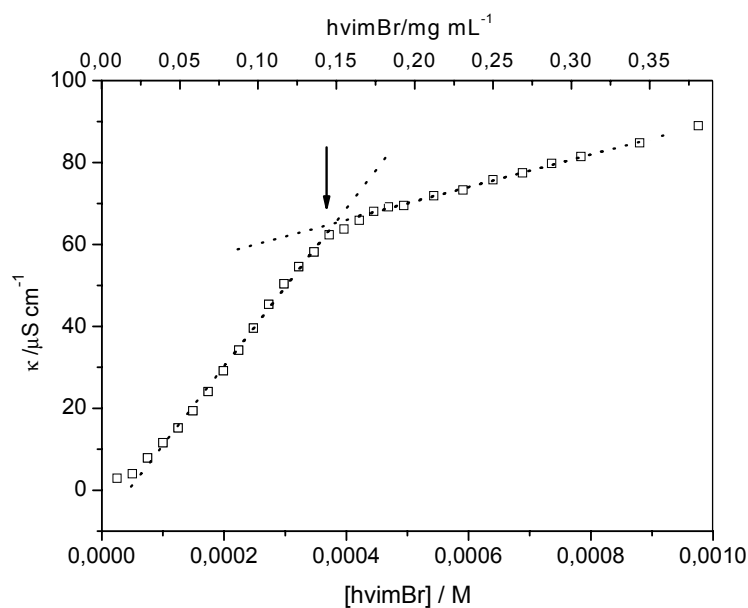


Fig. S4 Conductimetric determination of the CMC of hvimBr.

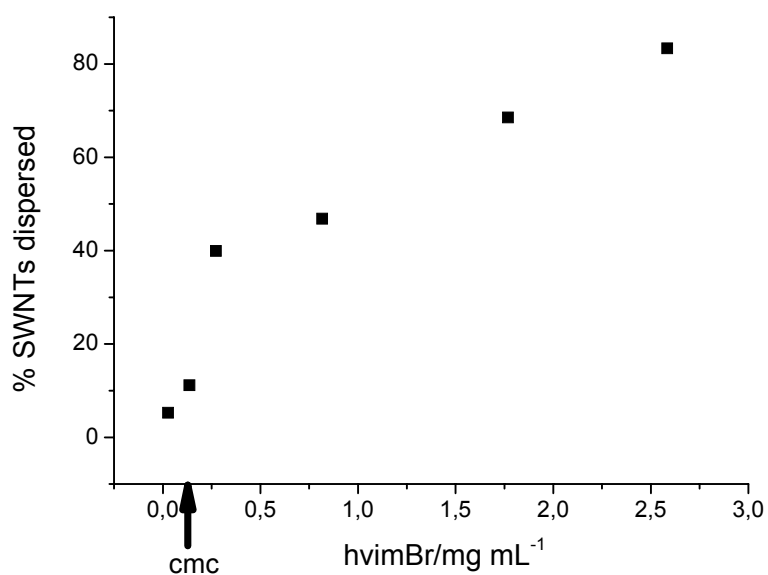


Fig. S5 Effect of the concentration of hvimBr on the dispersion of SWNTs in aqueous solution after 5 hrs of sonication.

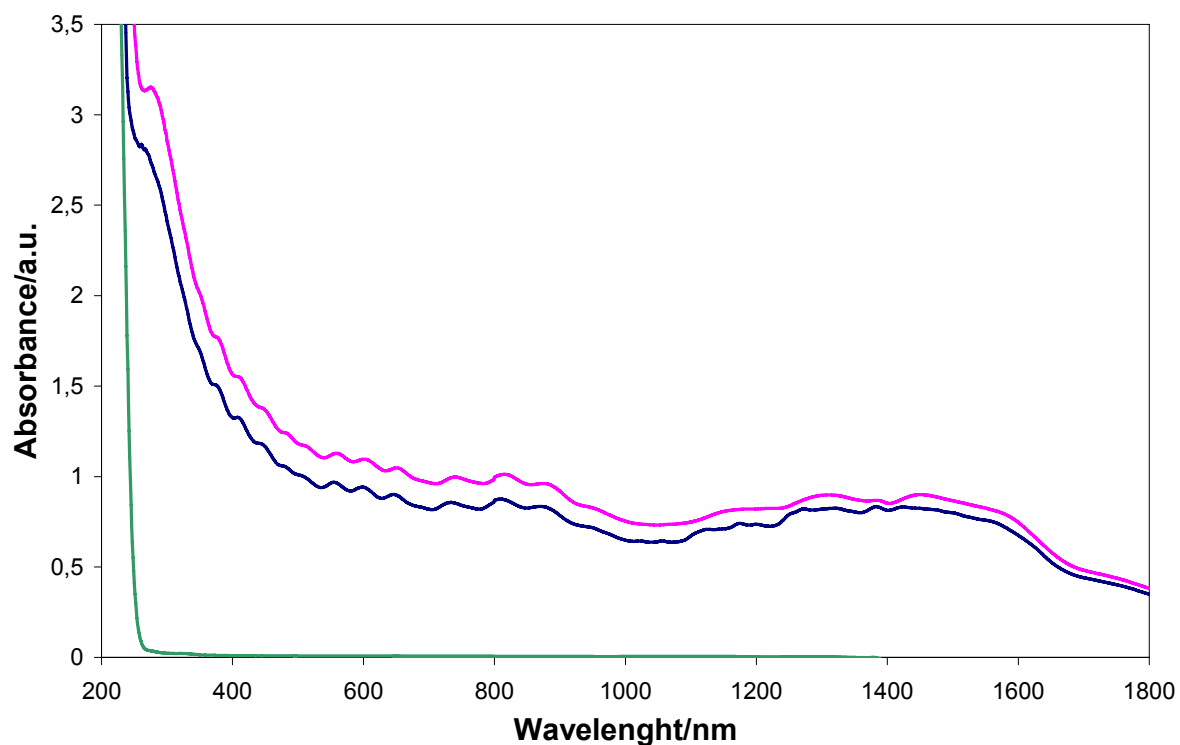


Fig. S6 UV-vis-NIR spectra of aqueous solution of SWNTs in 0.163 mg mL^{-1} SDBS (blue spectrum) and 0.163 mg mL^{-1} hvimBr (pink spectrum). The green spectrum corresponds to an aqueous solution of hvimBr.

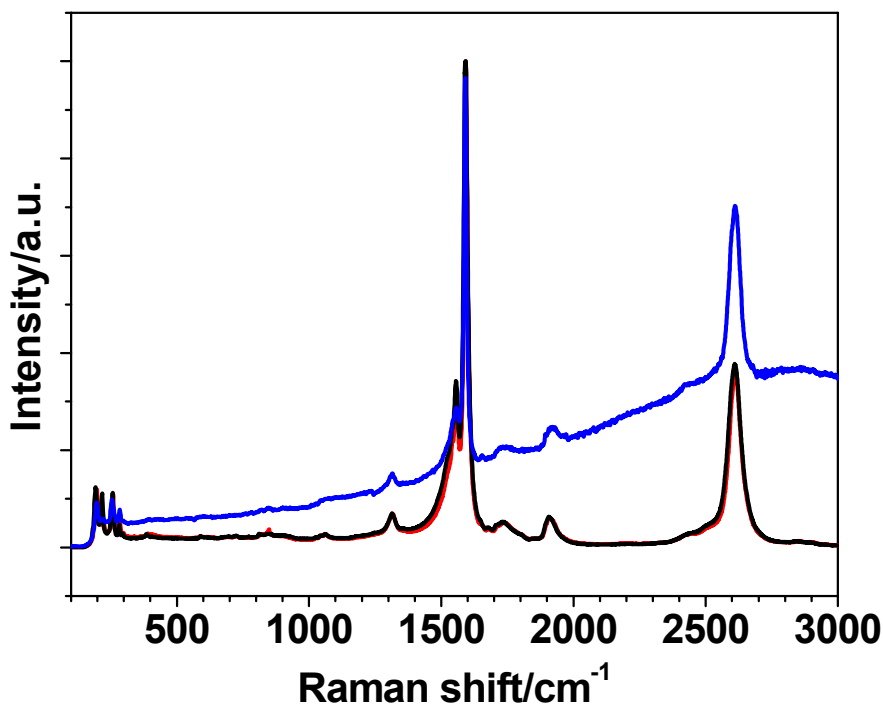


Fig. S7 Raman spectra (normalized on the G band) for solid SWNTs (black curve), for SWNTs dispersed in 2.58 mg mL⁻¹ hvimBr and sonicated for 17 hrs (blue curve) and for SWNTs washed from the ionic liquid (red curve). A Renishaw microRaman spectrometer, 633 nm exciting line of an He-Ne laser was used.

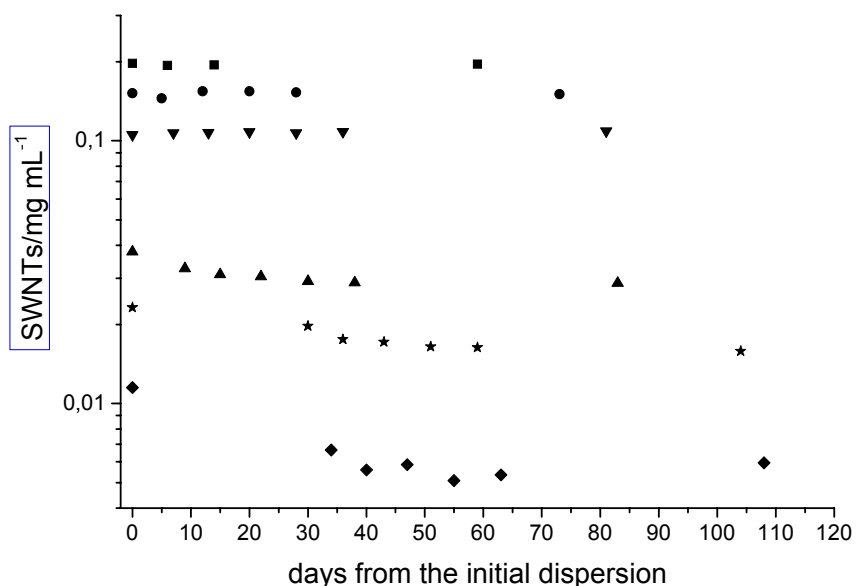


Fig. S8. Stability of SWNT dispersions over the time. Each dispersion was obtained at a constant hvimBr concentration: (♦) 0.0272 mg mL⁻¹; (★) 0.136 mg mL⁻¹; (▲) 0.272 mg mL⁻¹; (▼) 0.816 mg mL⁻¹; (●) 1.77 mg mL⁻¹; (■) 2.58 mg mL⁻¹.