Figure S-1. $^{11}$B-$^1$H-$^{11}$B-$^1$H 2D COSY NMR spectrum of [NMe$_4$][1].
Figure S-2. $^{11}\text{B}\{^1\text{H}\}-^{11}\text{B}\{^1\text{H}\}$ 2D COSY NMR spectrum of 2.
Figure S-3. $^{11}$B selective irradiation $^1$H NMR spectra of 2. Arrows indicate which boron was selectively irradiated. Colored areas are B-H related to boron irradiated.
Figure S-4.- A plot of $^1$H versus $^{11}$B chemical shifts for the individual BH$_{ex}$ units for 2.

\[ y = 0.0626x + 2.6682 \]

\[ R^2 = 0.9527 \]
Figure S-5. MALDI-TOF-MS of [NMe₄][I] (T= calculated, E=Experimental).
Figure S-6.- a) UV spectra of [NMe₄][1] in 6.5 mM solution of NaCl in acetonitrile/water mixture 30% (v/v) and, b) UV spectra of 2 in 6.5 mM solution of NaCl in acetonitrile/water mixture 60% (v/v).