Supporting Information for:

Chiral Nanostructuring of Multivalent Macrocycles in Solution and on Surfaces

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Figure S1. 2D $^1$H-DOSY NMR spectra of macrocyle (RR)-8 (top, 2 mM), and the adduct obtained by the addition of 2 equivalents of Pd(PhCN)$_2$Cl$_2$. 
Figure S2. $^1$H NMR titration of pyridine (0.1 mM) with Pd(MeCN)$_2$Cl$_2$ in $d_3$-MeCN at 25 °C. The peaks marked with yellow and green squares, respectively, are attributed to the $\alpha$-pyridyl proton resonances of the $cis$ and $trans$ square-planar Pd(py)$_2$Cl$_2$ complex.
Figure S3. Titration of compound \((R)-6\) \((1.8 \times 10^{-5} \text{ M})\) with \(\text{Pd(MeCN)}\text{Cl}_2\) in \(d_3\)-MeCN at 25 °C \((500 \text{ MHz})\).

Figure S4. UV spectra of pyridine containing precursors \((R)-6\) and \((R)-7\), and of macrocycles \((RR)-3\) and \((RR)-8\) \((\text{MeCN, c = 1-1.33 x 10}^{-5} \text{ M)})\).
Figure S5. CD spectra of pyridine containing precursor (R)-6, and of macrocycles (RR)-3 and (RR)-8 (c = 1.5 x 10^-6 M).

Figure S6. UV/Vis spectra of Pd(MeCN)₂Cl₂ (1.48 x 10^-4 - 8.07 x 10^-5 M) in MeCN.
Figure S7. CD Titration of compound (R)-6 (1.33 x 10^{-6} M) with Pd(MeCN)\textsubscript{2}Cl\textsubscript{2} in MeCN at 25°C.

Figure S8. AFM images of (RR)-8, C\textsubscript{60} and Pd(MeCN)\textsubscript{2}Cl\textsubscript{2} diluted in CHCl\textsubscript{3} at the graphite interface. (A and B) Example of elongated fibres. (C) A height profile measured along the white line shown (B).
Copies of NMR and Mass Spectra of Newly Synthesized Compounds

Macrocycle (RR)-3.

\(^1\)H NMR (CDCl\(_3\), 300 MHz)

\(^{13}\)C NMR (CDCl\(_3\), 75 MHz)
$^{13}$C NMR DEPT (CDCl$_3$, 75 MHz)

ESI mass spectrum
Compound (R)-6

$^1$H NMR (CDCl$_3$, 300 MHz)

$^{13}$C NMR (CDCl$_3$, 75 MHz)
$^{13}$C NMR DEPT (CDCl$_3$, 75 MHz)

ESI mass spectrum
Compound (R)-7.

$^1$H NMR (CDCl$_3$, 300 MHz)

$^{13}$C NMR (CDCl$_3$, 75 MHz)
$^{13}$C NMR DEPT (CDCl$_3$, 75 MHz)

ESI mass spectrum
Macrocycle (RR)-8.

$^1$H NMR (CDCl$_3$, 300 MHz)

$^{13}$C NMR (CDCl$_3$, 75 MHz)
$^{13}$C NMR DEPT (CDCl$_3$, 75 MHz)

ESI mass spectrum