Supporting Information

Reactions of CpArCHCHArCp with Ru$_3$(CO)$_{12}$: An Unexpected Cleavage of bridging C–C bond and Coupling of the Two Cyclopentadienyl Rings to Fulvalene Diruthenium Complexes

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Figure 10. ORTEP diagram of 8. Thermal ellipsoids are shown at the 30% level.

Figure 11. ORTEP diagram of 10-meso. Thermal ellipsoids are shown at the 30% level.

Figure 12. Full $^1$H–$^1$H COSY spectrum of complex 4 in CDCl$_3$.

Figure 13. $^1$H NMR spectrum of ligand 1 as a mixture of racemic and meso isomers with a ratio of about 1:0.9.

Figure 14. $^1$H NMR spectrum of ligand 1 as a pure racemic isomer.
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