Supplementary Material

A new and specific mode of stabilization of metallic nanoparticles

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Fig. S1 TEM micrograph of RuNPs stabilized by pyridine.

Fig. S2 $^{13}$C CPMAS NMR (100.5 MHz, 292 K) spectrum of RuL.

Fig. S3 $^2$H MAS NMR spectra (61.3 MHz, 291 K) of preformed RuL exposed under D$_2$ (3 bars) (top), followed by vacuum treatment (down).

Fig. S4 $^1$H NMR spectra (aromatic region, 500 MHz, THF-d$_8$, 298 K) corresponding to the 4-(3-phenylpropyl)pyridine/dodecanethiol exchange monitoring for RuL. Up: Signal at ca. 8.5 ppm corresponds to pyridinyl ortho protons; down: signals at 7.2-7.4 ppm correspond to the other aromatic protons.

Fig. S5 TEM micrographs (with the corresponding size distribution) corresponding to the monitoring of RuL formation (at 7, 22 and 35 minutes).
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