

## Supporting Information

### Binuclear (salen)osmium phosphinidine and phosphiniminato complexes

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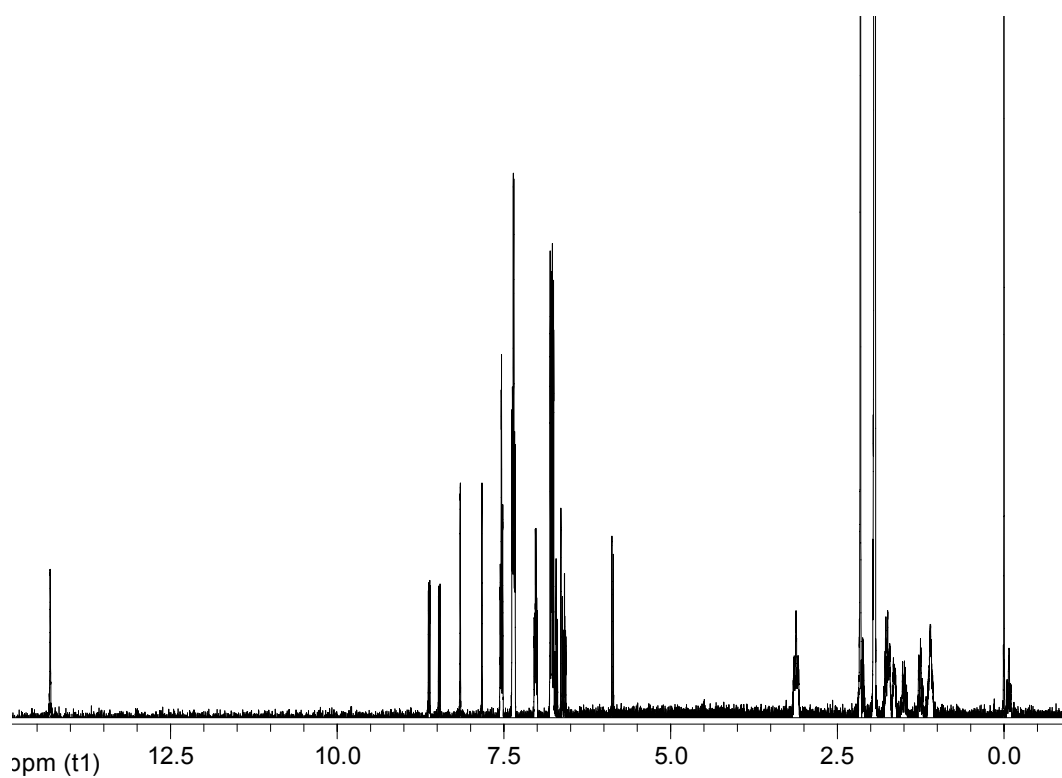


Fig. S1  $^1\text{H}$  NMR (400 MHz,  $\text{CD}_3\text{CN}$ ) of **1a**.

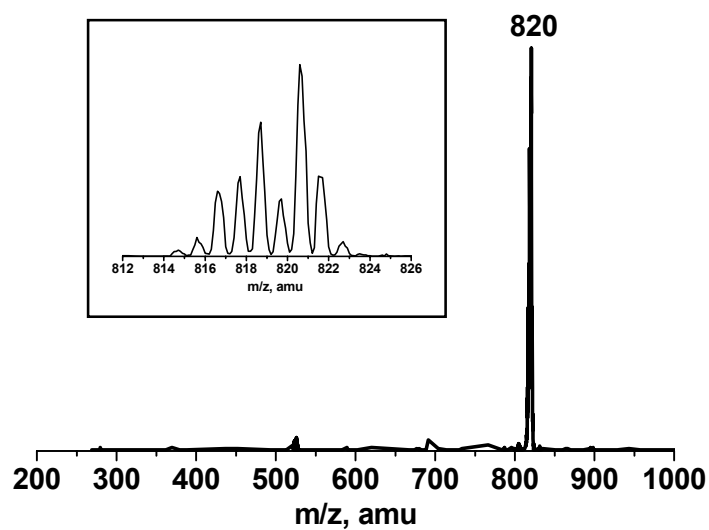


Fig. S2 ESI mass spectrum (+ve mode) of **1a** in CH<sub>3</sub>CN. Inset shows the expanded isotopic pattern.

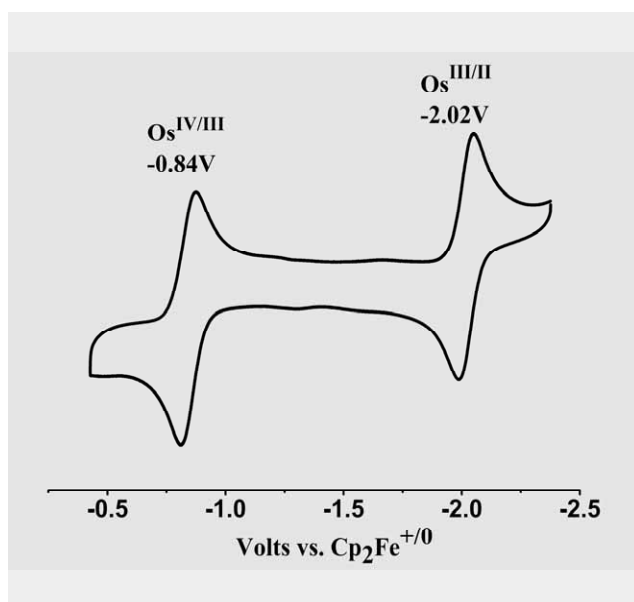


Fig. S3 CV of [Os<sup>IV</sup>(N(H)PPh<sub>3</sub>)(L<sup>1</sup>)(OMe)](PF<sub>6</sub>) (**1a**) in 0.1 M [<sup>n</sup>Bu<sub>4</sub>N]PF<sub>6</sub> in CH<sub>3</sub>CN.

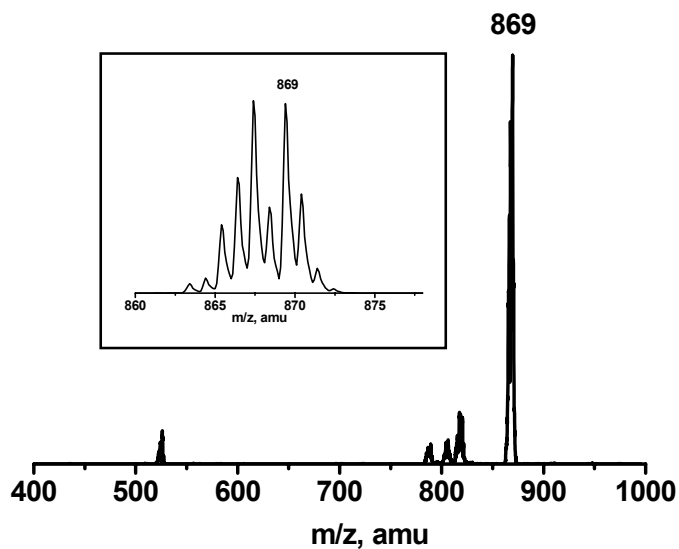


Fig. S4 ESI mass spectrum (+ve mode) of **2** in CH<sub>3</sub>CN. Inset shows the expanded isotopic pattern.

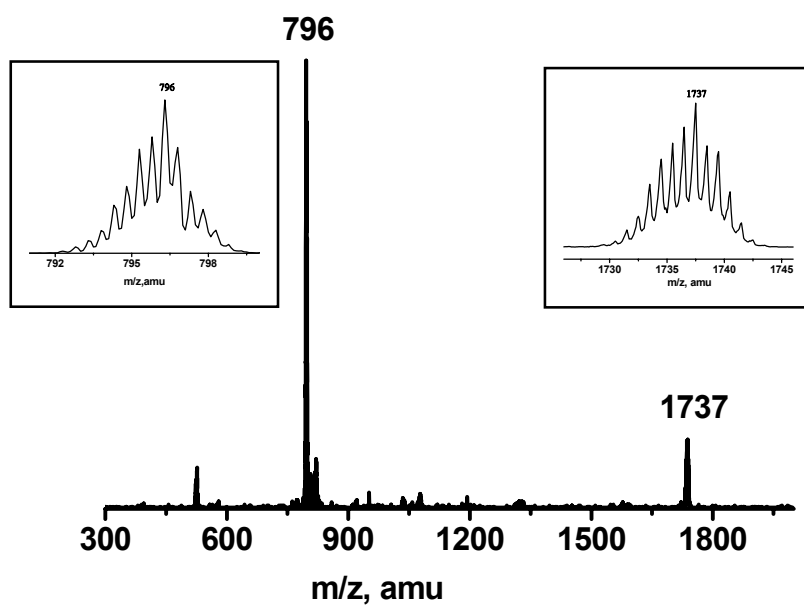


Fig. S5 ESI mass spectrum (+ve mode) of **3** in CH<sub>3</sub>CN. Insets show the expanded isotopic patterns.

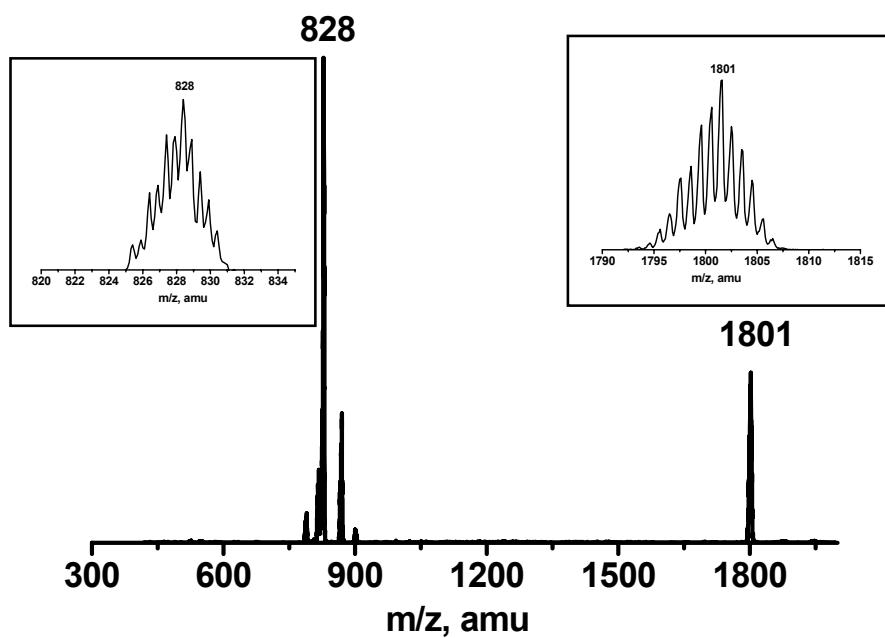


Fig. S6 ESI mass spectrum (+ve mode) of **4** in CH<sub>3</sub>CN. Insets show the expanded isotopic patterns.

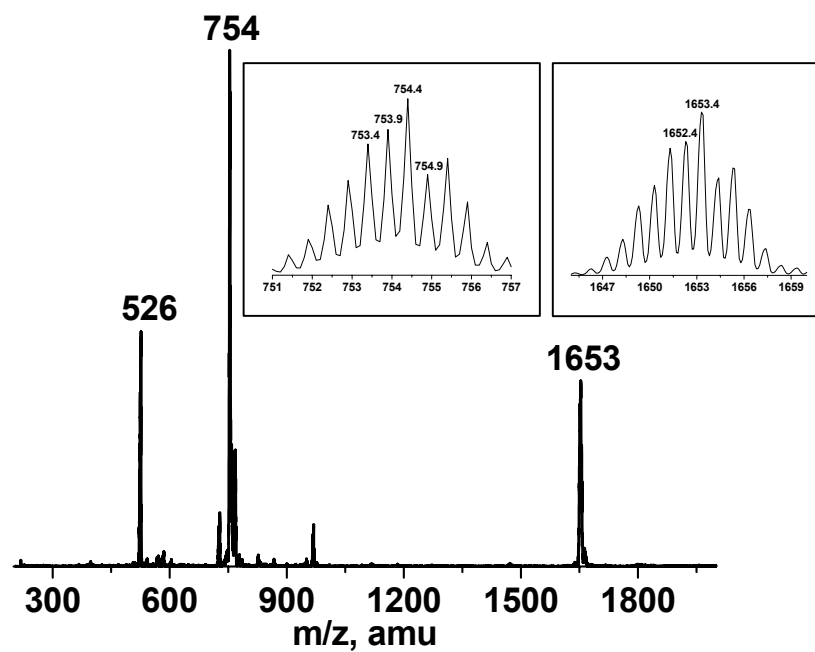


Fig. S7 ESI mass spectrum (+ve mode) of **5** in CH<sub>3</sub>CN. Insets show the expanded patterns.

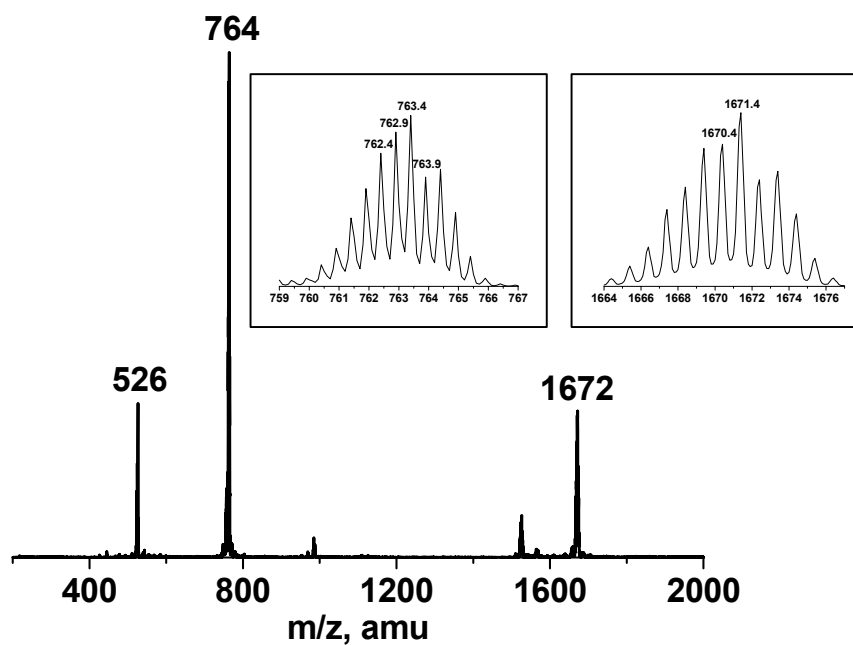


Fig. S8 ESI mass spectrum (+ve mode) of **6** in  $\text{CH}_3\text{CN}$ . Insets show the expanded patterns.

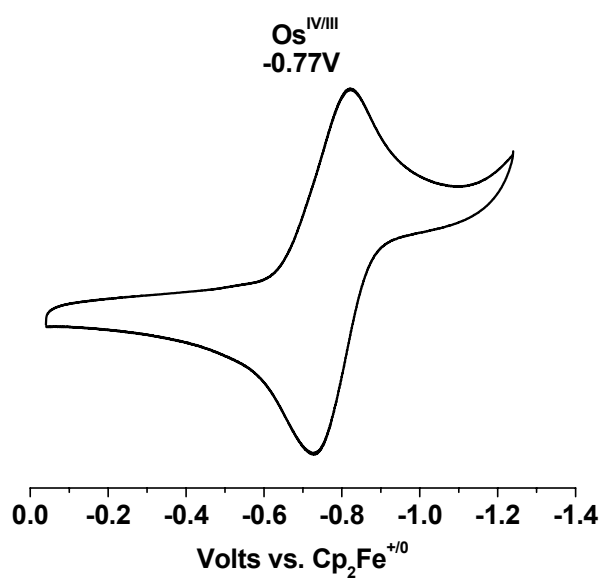
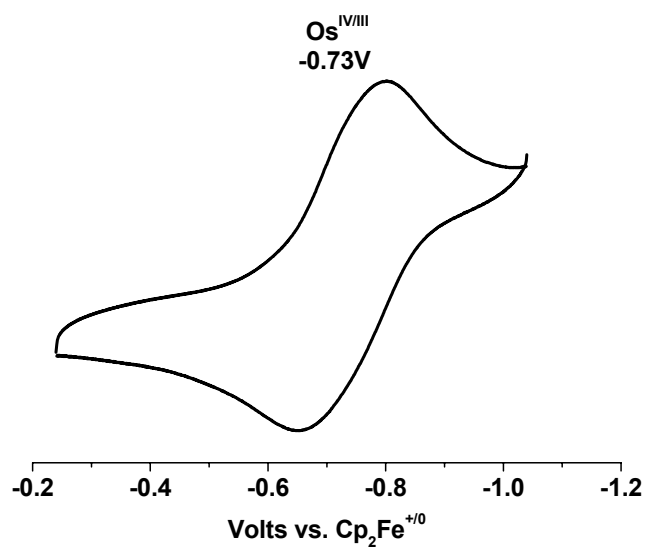


Fig. S9 CV of **5** (top) ( $\Delta E_p = 140$  mV) and **6** ( $\Delta E_p = 80$  mV) (bottom) in CH<sub>3</sub>CN.