Electronic Supplementary Material (ESI) for Dalton Transactions.

Supporting information

Electron ionization mass spectrometric analysis of air- and moisture-sensitive organometallic compounds

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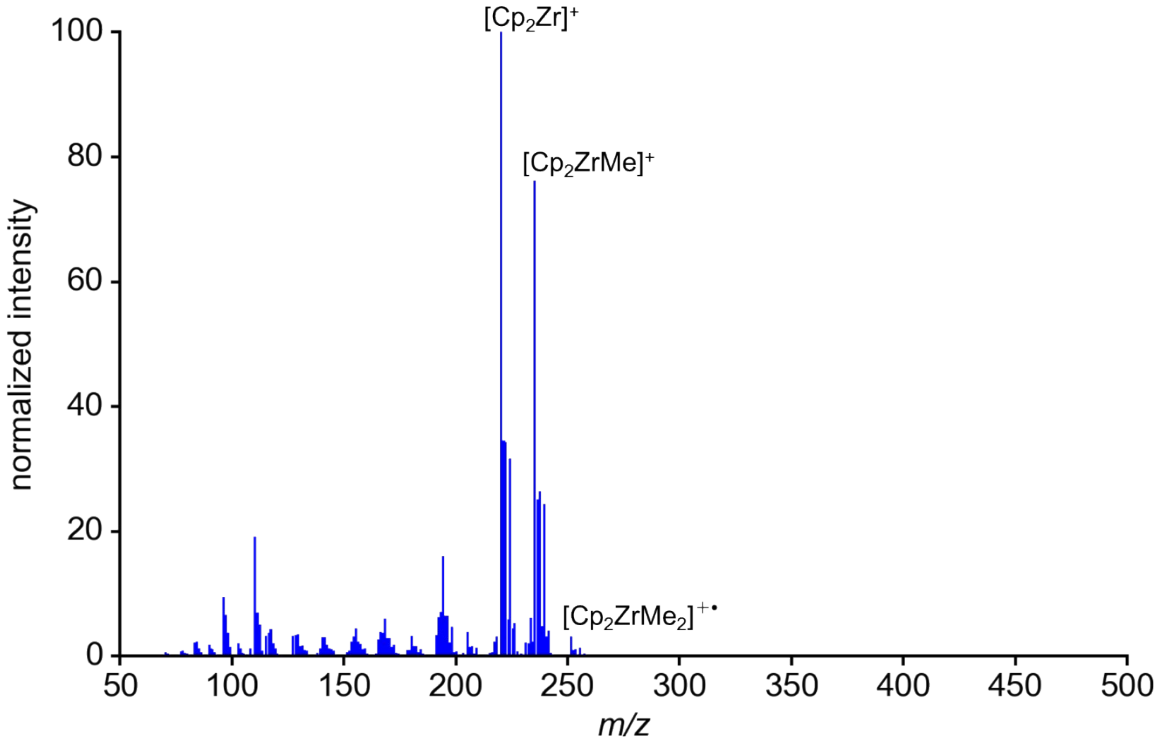
Supplementary EI Mass Spectra



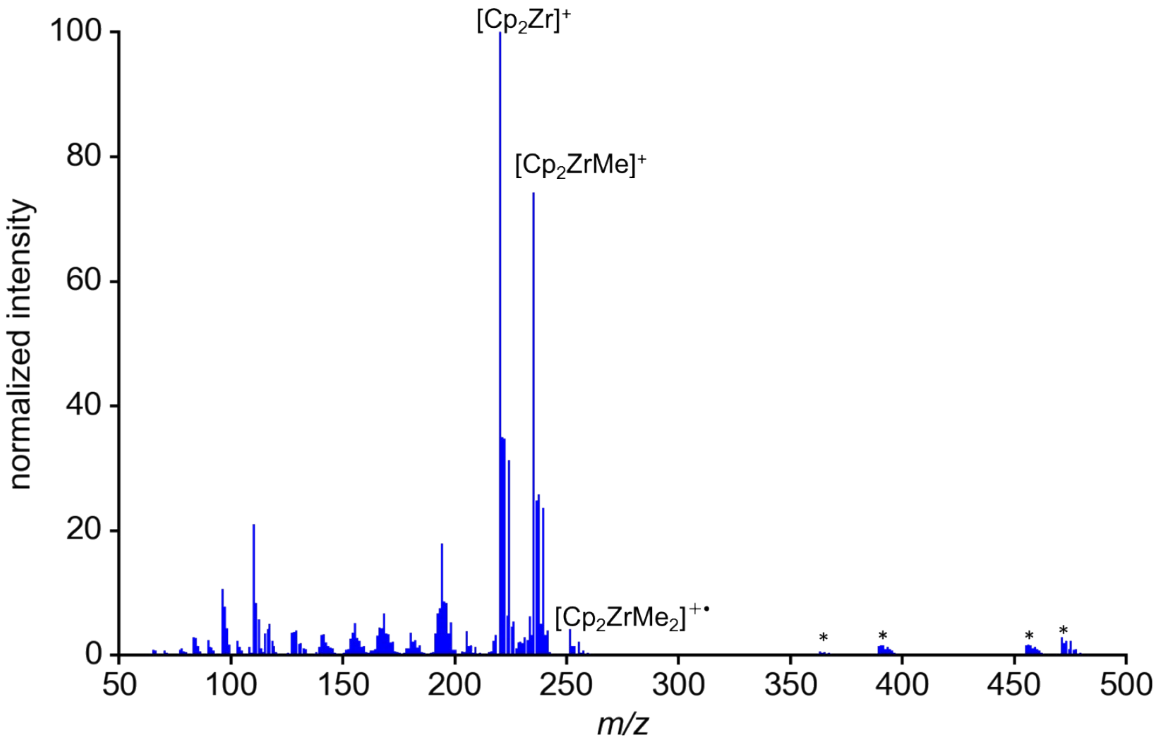


Figure SI 1. EI-MS spectrum of $ZrCp_2Me_2$ (*m/z* 250). Top: Spectrum obtained using the glove chamber. Bottom: The measurement was performed under air (no glove chamber). Peaks marked * are unassigned decomposition products.

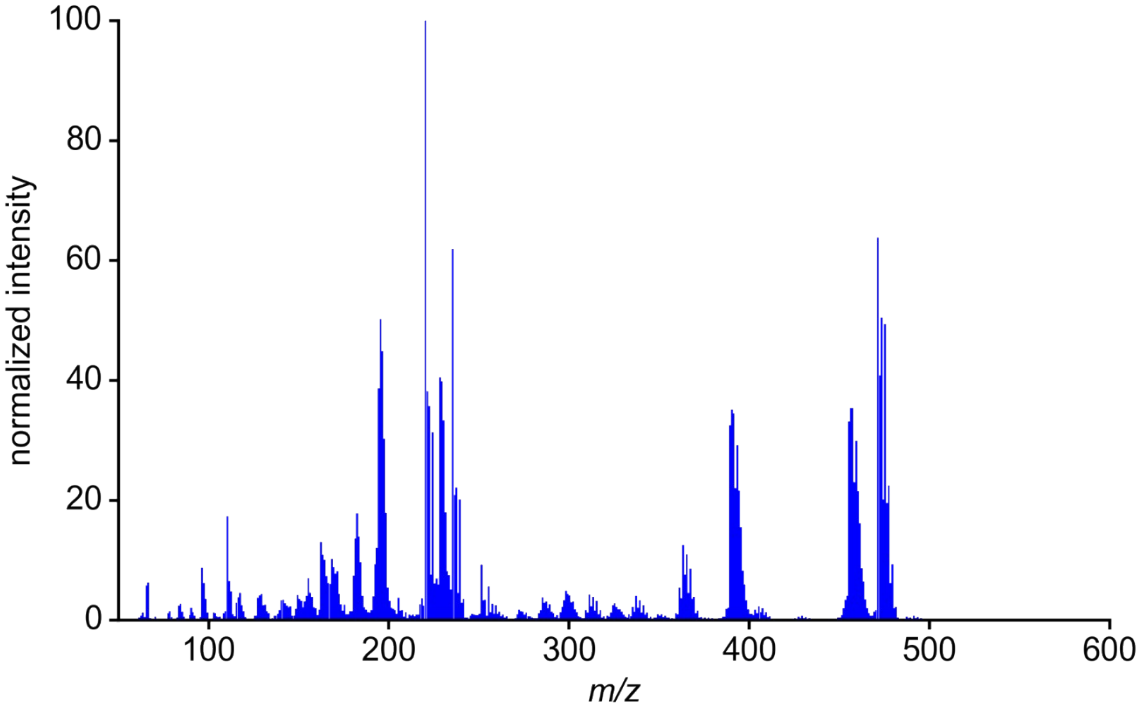


Figure SI 2. EI-MS spectrum of $ZrCp_2Me_2$ (*m/z* 250). The sample was exposed to air 45 min before measurement, which was performed under air (no glove chamber). Undefined dimeric oxidized products with abundant fragments at *m/z* 390, *m/z* 474 and *m/z* 487 were observed.

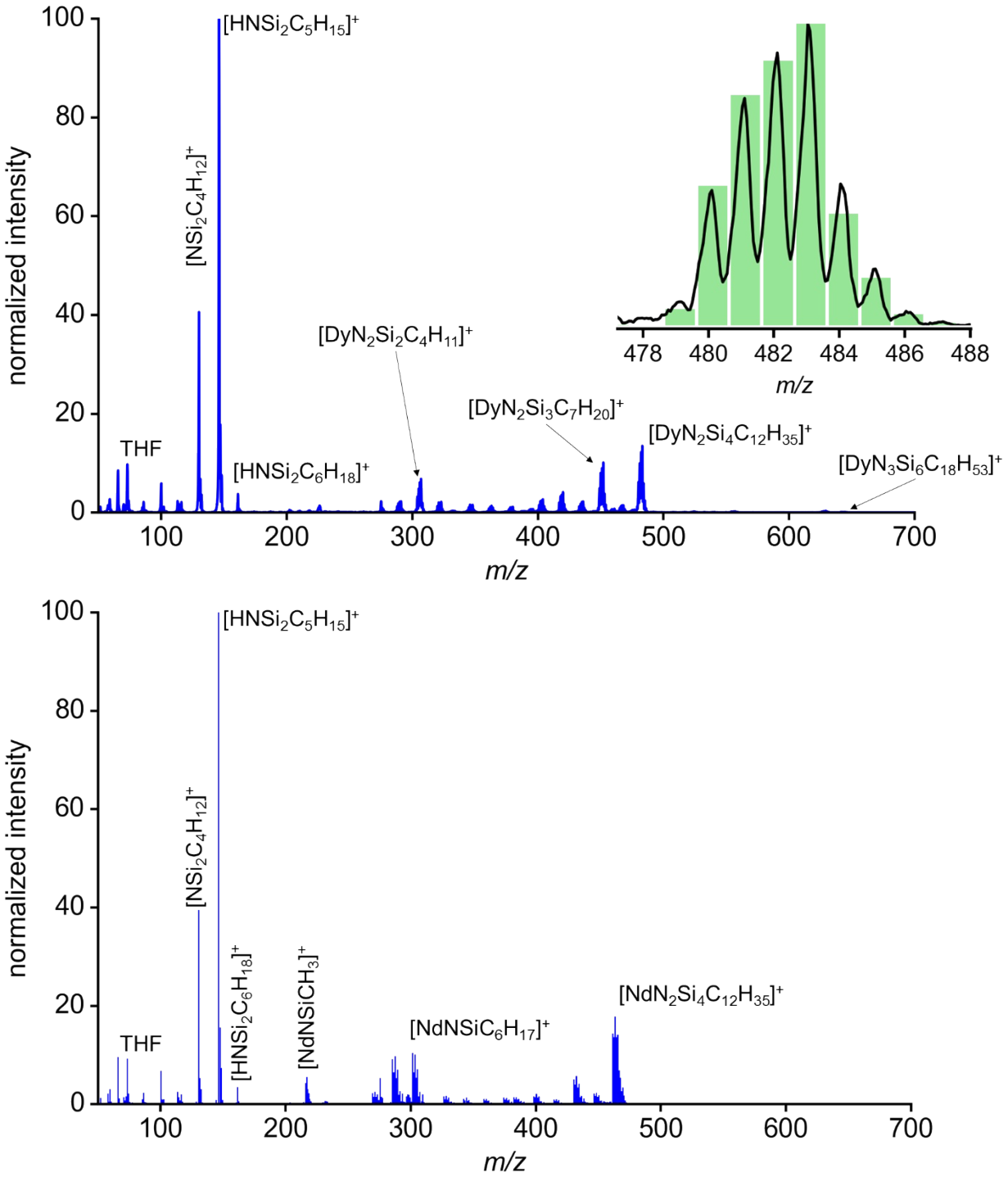


Figure SI 3. EI-MS spectra of $Dy[N(TMS)_2]_3$ (top) and $Nd[N(TMS)_2]_3$ (bottom) using the glove chamber. Inset: actual spectrum (black) and predicted isotope pattern (green bars).

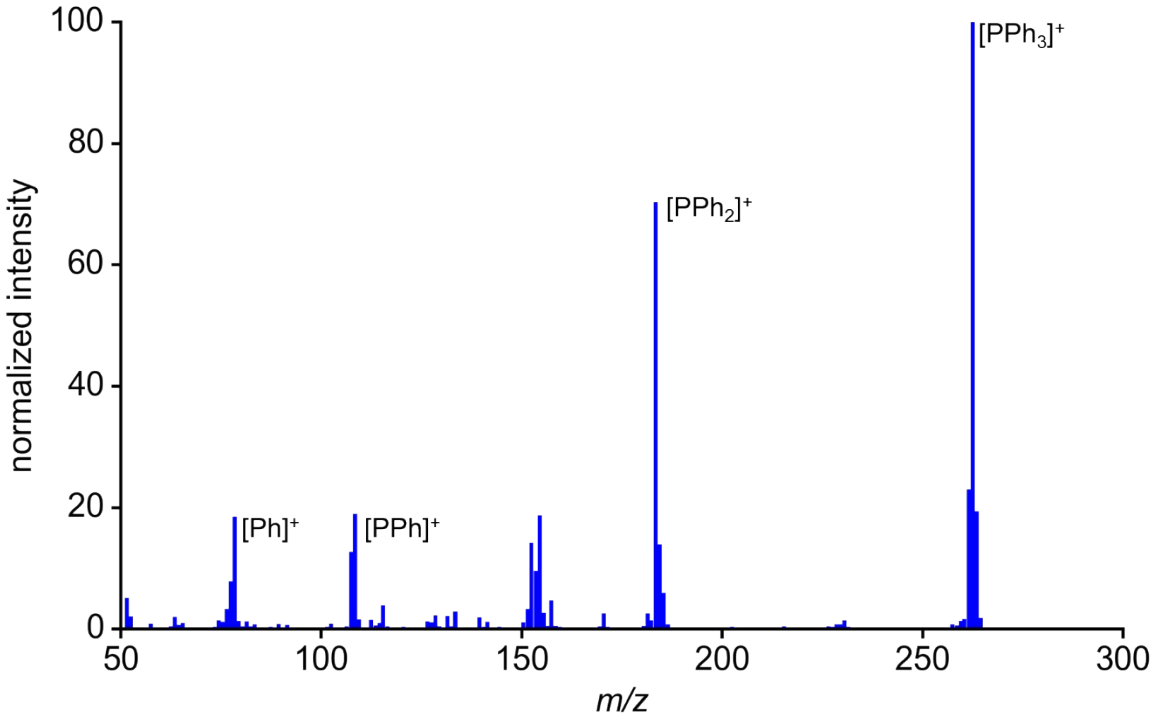


Figure SI 4. EI-MS spectra of $Rh(PPh_3)_3Cl$ using the glove chamber. The spectra shows fragments at *m/z* 262, *m/z* 184, *m/z* 108 and *m/z* 77 which are characteristic for triphenylphosphine. This suggests that the poor thermal stability of the Wilkinson's catalyst do not allow for EI-MS analysis.