

## Supplementary Information

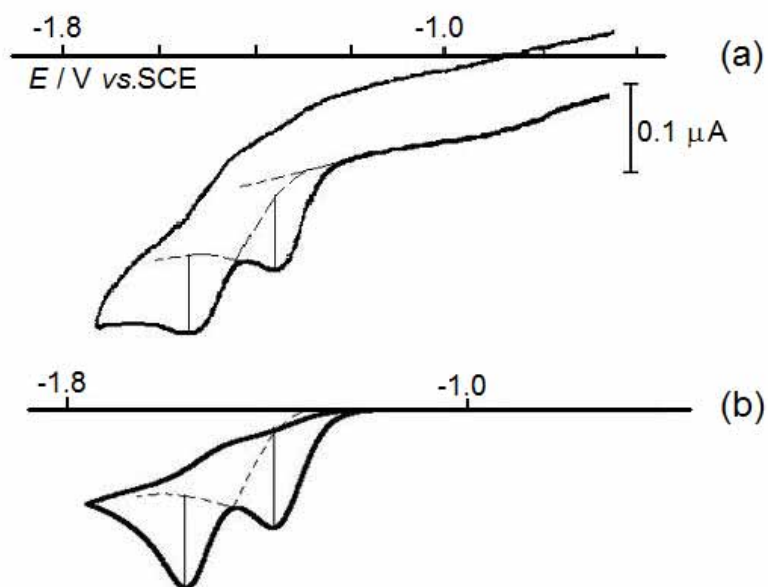


Figure S1 – Experimental ((a),  $c = 0.17 \text{ mM}$ ) and simulated ((b), see text for the proposed mechanism) cyclic voltammograms (cathodic scans) of *trans*- $[\text{MoI}_2(\text{dppe})_2]$  in  $[\text{NBu}_4][\text{BF}_4]/\text{thf}$  at  $0.4 \text{ Vs}^{-1}$ .

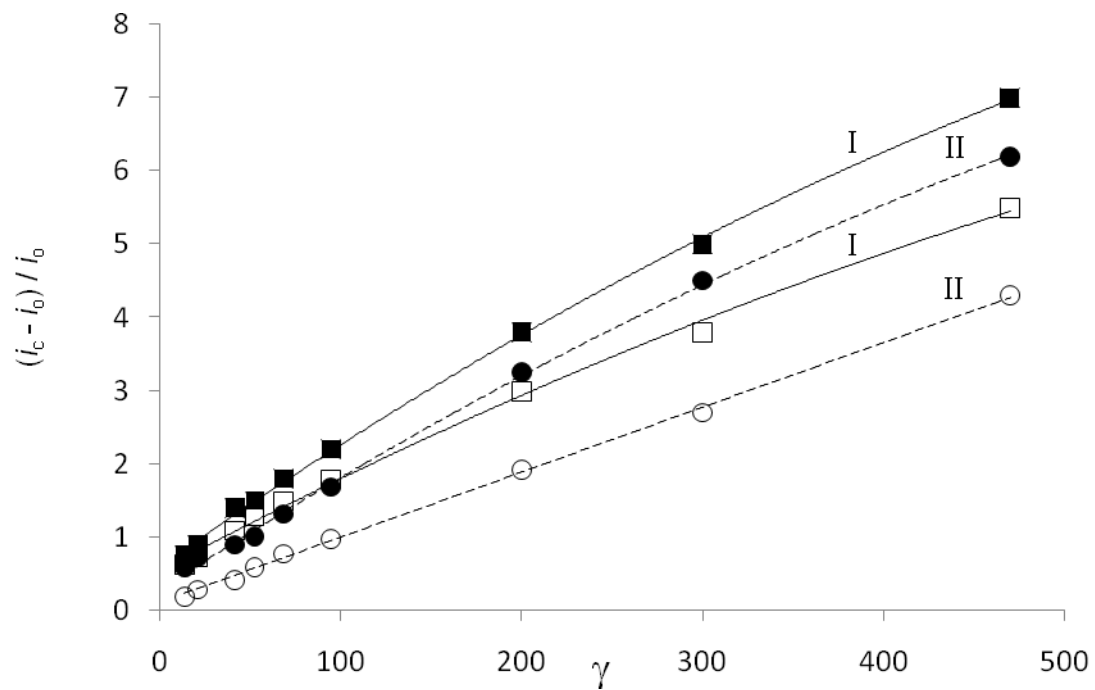


Figure S2 – Plot of the normalized peak current  $(i_c - i_0)/i_0$  versus  $\gamma$  (organohalide/1 molar ratio) for waves I (square markers and full lines) and II (circle markers and dashed lines) of the 1/*t*-BuI system and for the scan rates of 0.2 (filled markers) and 0.8 (opened markers)  $\text{Vs}^{-1}$ . Concentration of the molybdenum complex 1,  $c = 0.19$  mM.