Synthesis and Redox Properties of Triarylmethane Dye Cation

Salts of Anions \([M_6O_{19}]^{2-}\) (M = Mo, W)

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Supplementary Information

Figures S1-S7
Figure S1. ESI mass spectrum of CV$_2$[Mo$_6$O$_{19}$] (negative ion mode).
Figure S2. Comparison of the cyclic voltammograms of [PR]Cl, [Bu₄N]₂[Mo₆O₁₉] and PR₂[Mo₆O₁₉] in MeCN (0.1 M Bu₄NPF₆). ν, 100 mV s⁻¹. Blue: [PR]Cl; red: [Bu₄N]₂[Mo₆O₁₉]; black: PR₂[Mo₆O₁₉].

Figure S3. Comparison of [CV]Cl, [Bu₄N]₂[Mo₆O₁₉] and CV₂[Mo₆O₁₉] in MeCN (0.1 M Bu₄NPF₆). ν, 100 mV s⁻¹. Blue: [CV]Cl; red: [Bu₄N]₂[Mo₆O₁₉]; black: CV₂[Mo₆O₁₉].
**Figure S4.** Comparison of [CV]Cl, [Bu₄N]₂[W₆O₁₉] and CV₂[W₆O₁₉] in MeCN (0.1 M Bu₄NPF₆). ν, 100 mV s⁻¹. Blue: [CV]Cl; red: [Bu₄N]₂[W₆O₁₉]; black: CV₂[W₆O₁₉].

**Figure S5.** Comparison of cyclic voltammograms of solid [PR]Cl, [Bu₄N]₂[Mo₆O₁₉] and PR₂[Mo₆O₁₉] in contact with [Emim][tfsa]. Black trace - PR₂[Mo₆O₁₉], red trace - [Bu₄N]₂[Mo₆O₁₉], and blue trace - [PR]Cl.
Figure S6. Comparison of [CV]Cl, [Bu4N][Mo6O19] and CV2[Mo6O19]. Black trace - CV2[Mo6O19], red trace - [Bu4N][Mo6O19], and blue trace - [CV]Cl.

Figure S7. Comparison of cyclic voltammograms of solid [CV]Cl, [Bu4N][W6O19] and CV2[W6O19] in contact with [Emim][tfsa]. Black trace - CV2[W6O19], red trace - [Bu4N][W6O19], and blue trace - [CV]Cl.