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Title: Spectroscopic and electrochemical studies of high-valent water soluble manganese porphyrine. Electrochemical water oxidation

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Highlights

- Chemical and electrochemical oxidation of $[\text{PMn(III)}]\text{Cl}_5$ was studied.
- $[\text{PMn(III)}]\text{Cl}_5$ are characterized by Uv-vis spectroscopy and cyclic voltammetry.
- Intermediates with higher oxidation states, $[\text{PMn(IV)=O}]^{+4}$ and $[\text{PMn(V)=O}]^{+5}$, are formed.
- High oxidation current is due mainly to the water catalytic oxidation by $[\text{PMn(V)=O}]^{+5}$.

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