Stable metal radical complexes from o-phenylenediamine-based ligands.

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The association of non-innocent ligands with earth-abundant metals has recently emerged as a promising bio-inspired strategy for the development of sustainable, efficient and reliable homogeneous catalysts, which meet the global economical and environmental concerns. The synthesis of new redox-active ligands would not only allow the design of eco-compatible efficient catalysts, but also bring unsuspected reactivities.

Our group has recently designed and synthesized unprecedented o-phenylenediamine-derived tri- and tetradeptate pro-radical ligands (Figure 1), as well as the related first-row late transition metal radical complexes.\(^1\)\(^2\) The presentation will give an overview of the redox chemistry and the reactivity of these unique metal species.

![Figure 1: o-phenylenediamine-derived pro-radical ligands.](image)
