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Artificial metalloenzymes for sustainable chemical synthesis

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PURPOSE OF THE ABSTRACT
Artificial metalloenzymes can be prepared using a range of different synthetic techniques from the supramolecular binding of a synthetic metal complex to the incorporation of metal binding amino acids directly in the protein backbone [1]. My group is interested in exploring these different routes to make ArMs based on carrier protein scaffolds. In this poster, I will highlight ongoing projects within the group aimed at making a range of biocatalysts with late-transition metals (Pd, Ir, Ru, Rh) for reactions including Pd-catalysed cross couplings, enantioselective transfer hydrogenation and hydroformylation.

FIGURES

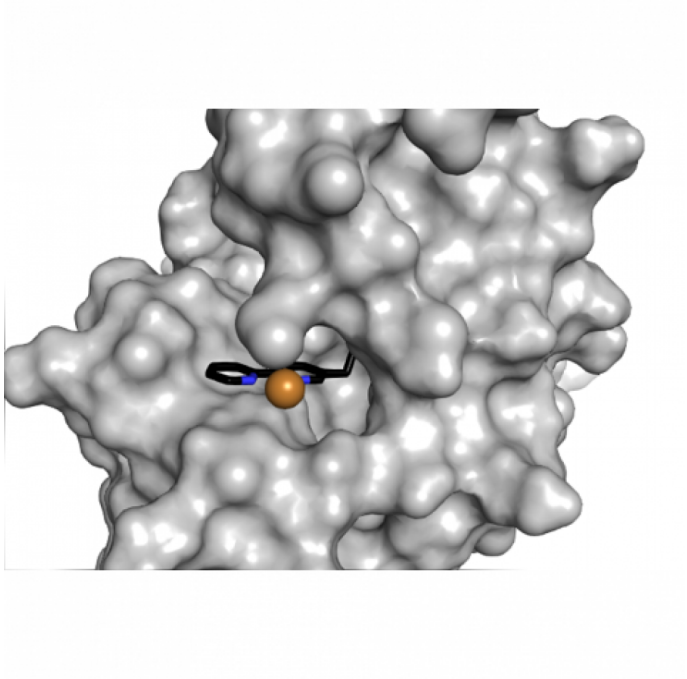

FIGURE 1

Figure 1

ArM formed from the Steriod Carrier protein including Bipyridylalanine.

FIGURE 2

KEYWORDS

Artificial metalloenzymes | Steriod Carrier Protein | late-transition metal catalysis

BIBLIOGRAPHY

[1] Schwizer, F.; Okamoto, Y.; Heinisch, T.; Gu, Y.; Pellizzoni, M. M.; Lebrun, V.; Reuter, R.; Köhler, V.; Lewis, J. C.; Ward, T. R. Chem. Rev. 2018, 118, 142.