Cover Picture

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The cover picture shows a rhodium catalyst (green) that is encapsulated by three porphyrin molecules (black; the van der Waals radii are shown in yellow). The hemispherical assembly is obtained by a self-assembly process using readily available pyridylphosphane and zinc-porphyrin building blocks. Its exclusive formation is based on selective coordination of the nitrogen atom to the zinc atom and the phosphane group to the rhodium center. The catalyst assemblies show a higher activity than the free rhodium catalyst in the rhodium-catalyzed hydroformylation of 1-octene, and the branched product is now the main product. In a similar way, the assembly of porphyrin building blocks to pyridylphosphane can regulate the performance of palladium catalysts in the Heck reaction. Further details about these catalyst assemblies can be found in the article by Reek et al. on p. 4271 ff.

