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**Enantiofacial Discrimination of Carbon Nucleophiles**

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Asymmetric formation of C-C bonds, especially to create quaternary centers, represents a very important challenge. Use of metal catalyzed asymmetric allylic alkylations to achieve such a result is particularly problematic since the mechanism of such reactions typically involve C-C bond formation outside the coordination of the metal. Thus, the ability for chiral ligands in such reactions to differentiate the prochiral faces of a carbanion would appear to be unlikely considering the remoteness of the chiral inducing agent and the asymmetric center being created. Nevertheless, exploration of such reaction types and the implication of such reactions for the synthesis of complex bioactive molecules will be discussed.