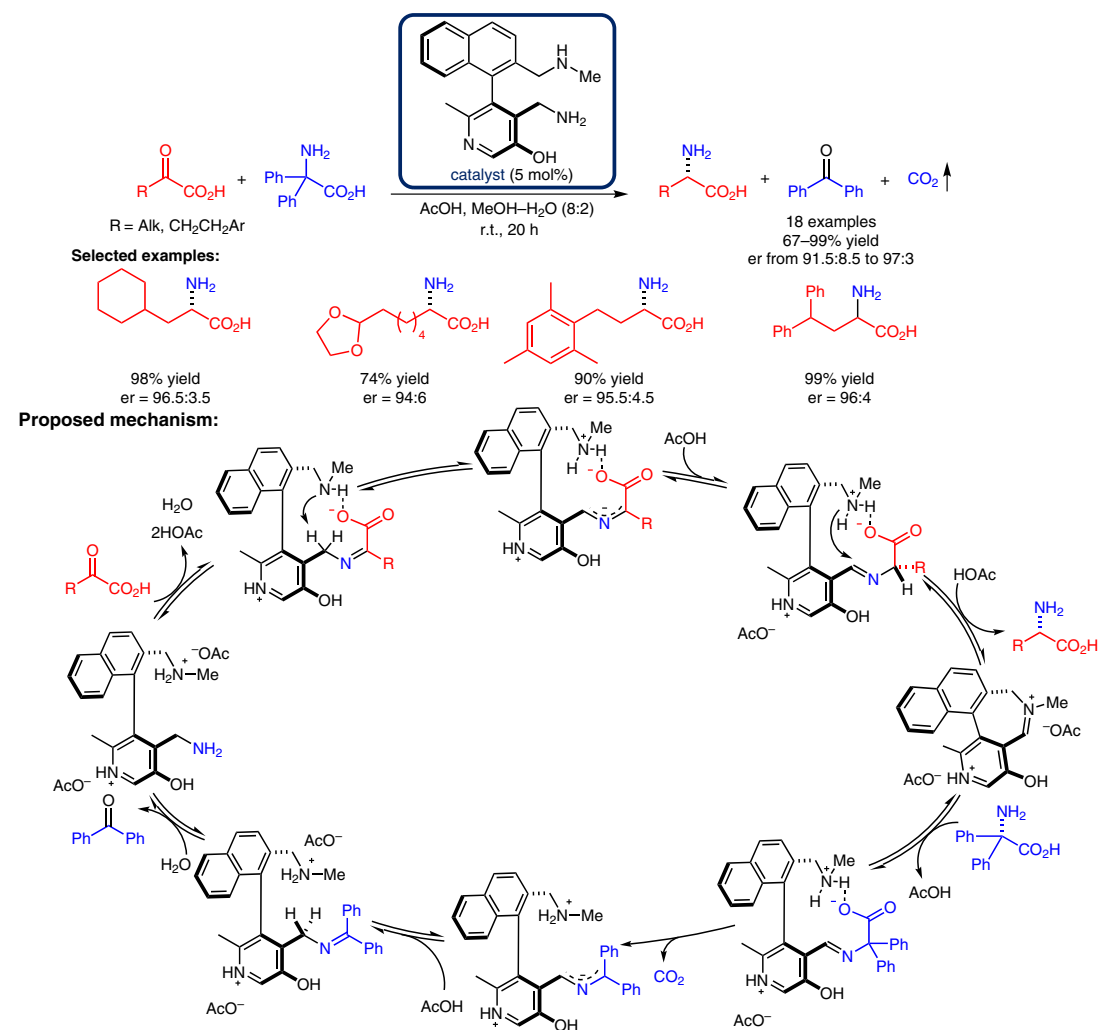


Y. E. LIU, Z. LU, B. LI, J. TIAN, F. LIU, J. ZHAO, C. HOU, Y. LI, L. NIU, B. ZHAO*
(SHANGHAI NORMAL UNIVERSITY, P. R. OF CHINA)

Enzyme-Inspired Axially Chiral Pyridoxamines Armed with a Cooperative Lateral Amine Chain for Enantioselective Biomimetic Transamination

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Novel Pyridoxamines for Enantioselective Biomimetic Transamination



Significance: Zhao and co-workers report a novel pyridoxamine catalyst bearing a lateral amine chain. Using this catalyst, they successfully mimicked the transamination activity of transaminases in converting α -keto acids into the corresponding amino acids with commercially available diphenylglycine as the co-substrate; the reaction gave good yields and showed excellent enantioselectivity.

SYNFACTS Contributors: Benjamin List, Oleg Grossmann
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Comment: Transamination of α -keto acids is a significant process for generating various amino acids in biological systems; consequently, great efforts have been made since the 1970s to achieve pyridoxamine-based biomimetic asymmetric transamination. In this work, enantioselectivities in excess of 90:10 were achieved under mild conditions for the first time.