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A new type of amino amide organocatalyzed enantioselective crossed aldol reaction of ketones with aromatic aldehydes

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A new type of amino amide organocatalysts A was designed and synthesized from commercially available amino acids and polycyclic aromatic amines. The prepared multifunctional organocatalysts A explored as a new class of catalysts with distinctive properties such as easy synthesis, stable in air, and the potential for convenient alteration of the steric sites. Their catalytic activities were examined in enantioselective crossed aldol reaction of various acyclic and cyclic ketones 2 with aromatic aldehydes 3 to afford the corresponding chiral anti-aldol adducts 4 that is a versatile precursor for the synthesis of chiral biologically active compounds and drug molecules.

Biography

Isiaka Alade Owolabi received his MTech. degree in 2015 from Tshwane University of Technology, Pretotia South Africa. He later joined the Graduate School of Engineering, Synthetic Organic Chemistry Laboratory at Muroran Institute of Technology as a Ph.D. student under supervision of Prof. Hiroto Nakano in 2016. His research interest is organocatalytic asymmetric organization.

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