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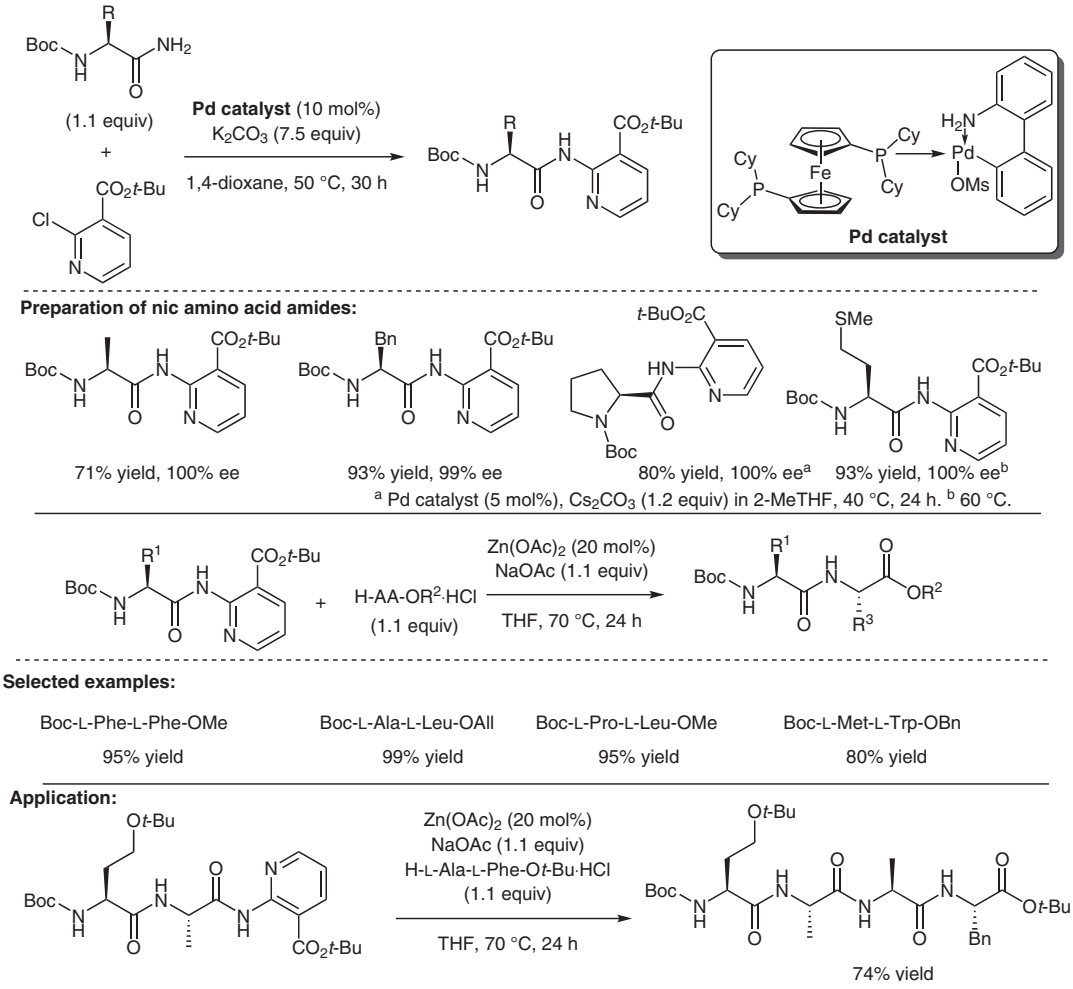
Zn-Catalyzed Nicotinate-Directed Transamidations in Peptide Synthesis
ACS Catal. **2020**, *10*, 4280–4289.

Zinc-Catalyzed Peptide Synthesis by Using a Nicotinate-Directed Protocol



Significance: Development of new systems for peptide-bond formation is an ongoing challenge to organic chemists. The authors report a new strategy using *tert*-butyl nicotinate amino amides, formed from amino acids and *tert*-butyl 2-chloronicotinate with palladium catalysis, as excellent nucleophiles for the synthesis of dipeptides.

Comment: Various *tert*-butyl nicotinate amino amides were smoothly generated in high yields and high enantioselectivities. The products and amino acid ester HCl salts were easily converted into the corresponding dipeptides by using zinc catalysis. Furthermore, this protocol can also be applied in the synthesis of tripeptides.

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Category
Peptide Chemistry

Key words
zinc catalysis
palladium catalysis
butylnicotinate amino amides
directing group
transamidation

Synfact of the Month