

T. NANJO*, A. MATSUMOTO, T. OSHITA, Y. TAKEMOTO* (KYOTO UNIVERSITY, JAPAN)
 Synthesis of Chlorinated Oligopeptides via γ - and δ -Selective Hydrogen Atom Transfer Enabled by the *N*-Chloropeptide Strategy
J. Am. Chem. Soc. **2023**, *145*, 19067–19075, DOI: 10.1021/jacs.3c06931.

Cu-Catalyzed Regioselective Chlorination of Peptides

Category

Peptide Chemistry

Key words

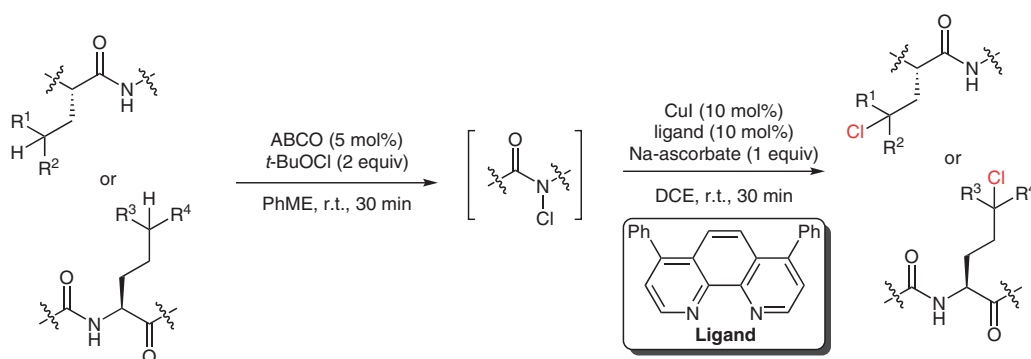
chlorination

copper catalysis

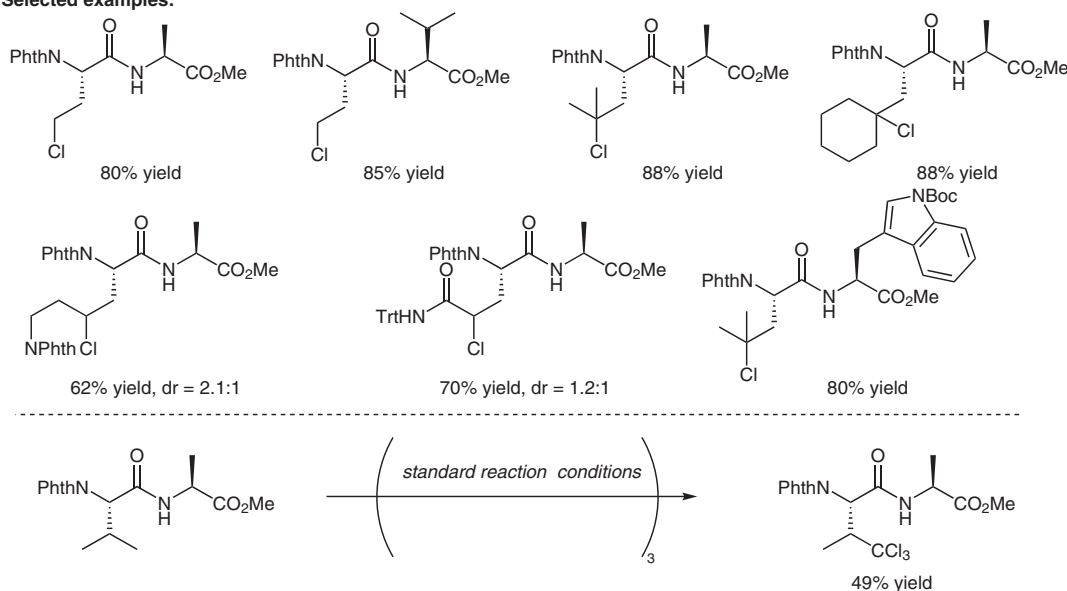
peptides

hydrogen atom transfer

Synfact
 of the
 Month



Selected examples:



Significance: The late-stage diversification of structurally complex peptides bears enormous potential for drug discovery and construction of bioactive products. The authors have demonstrated a chlorination of peptides via selective hydrogen transfer of *N*-chloropeptides.

Comment: The selective chlorination was performed for various dipeptides by the help of copper catalysis with high regioselectivity. Furthermore, the reaction could be applied for the introduction of three chlorine atoms by repetition of the standard reaction.

SYNFACTS Contributors: Hisashi Yamamoto, Tomohiro Hattori
 Synfacts 2023, 19(11), 1161 Published online: 17.10.2023
 DOI: 10.1055/s-0042-1751615; Reg-No.: H09423SF

© 2023, Thieme. All rights reserved.
 Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany