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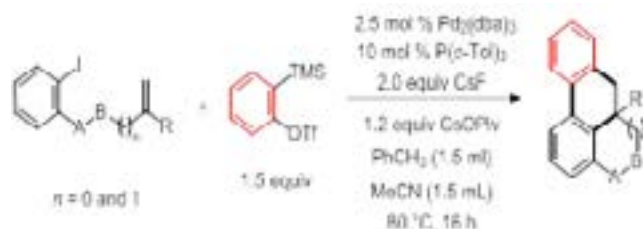
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Palladium-catalyzed domino Heck/aryne carbopalladation/C-H functionalization: Synthesis of heterocycle-fused 9, 10-dihydrophenanthrenes

Tuanli Yao

Shaanxi University of Science and Technology, China

Arynes generated from the corresponding *o*-(trimethylsilyl) aryl triflates have emerged as powerful synthons in organic synthesis. Aryne annulation reactions with intramolecular C-H functionalization can be a powerful method for the synthesis of polycyclic compounds. We developed a novel palladium-catalyzed domino Heck/aryne carbopalladation/C-H functionalization reaction using *in situ* generated arynes, in which three new C-C bonds and a carbon quaternary center are formed. This methodology affords moderate to excellent yields of heterocycle-fused 9, 10-dihydrophenanthrenes.



Biography

Tuanli Yao has completed his PhD from Iowa State University and Post-doctoral studies from University of California, Berkeley. He worked as Senior Scientist at Deciphera Pharmaceuticals and Associate Researcher at University of Kansas. Currently, he is a Professor at Shaanxi University of Science & Technology. His research interests include "Aryne chemistry, electrophilic cyclization and palladium catalysis". He has published more than 30 papers in reputed journals.

yaotuanli@sust.edu.cn

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