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## Palladium catalyzed domino heck/aryne carbopalladation/c-h functionalization: Synthesis of heterocycle-fused 9,10-dihydrophenanthrenes

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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 postdoctoral studies from University of California, Berkeley. He worked as Senior Scientist at Deciphera Pharmaceuticals and Associate Researcher at University of Kansas before beginning his career in academy. Currently, he is 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.

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