**Palladium-Catalyzed Linear-Selective Negishi Cross-Coupling of Allylzinc Halides**

Y. Yang, T. J. L. Mustard, P. H.-Y. Cheong,* S. L. Buchwald* (Massachusetts Institute of Technology, Cambridge and Oregon State University, Corvallis, USA)


**Significance:** Cheong, Buchwald, and co-workers report the first completely linear-selective palladium-catalyzed Negishi cross-coupling of various 3,3-disubstituted allylzinc reagents with (hetero)aryl and vinyl (pseudo)halides, leading to prenylated (hetero)aryl and alkenyl compounds in high yield and with excellent regioselectivity.

**Comment:** Apart from (hetero)aryl and vinyl bromides and chlorides, nonaflates and triflates were successfully used in this protocol. Computational studies reveal that an $\eta^1/\alpha$ reductive elimination is preferred due to energetic reasons, leading exclusively to the prenylated products. Thus, the choice of catalyst and transmetalation reagent is crucial.

**Selected examples:**

- 78% yield
  - $\omega/\gamma > 99:1$
  - $R_1 = X = Br, Y = Br$
- 93% yield
  - $\omega/\gamma > 99:1$
  - $R_1 = X = Br, Y = Br$
- 95% yield
  - $\omega/\gamma > 99:1$
  - $R_1 = X = Br, Y = Br$
- 94% yield
  - $\omega/\gamma > 99:1$
  - $R_1 = X = Br, Y = Br$
- 90% yield
  - $\omega/\gamma > 99:1$
  - $R_1 = X = OTf, Y = Br$
- 92% yield
  - $\omega/\gamma > 99:1$
  - $R_1 = X = ONf, Y = Br$
- 92% yield
  - $\omega/\gamma > 99:1$
  - $R_1 = X = ONf, Y = Br$
- 75% yield
  - $\omega/\gamma > 99:1$
  - $R_1 = X = OTf, Y = OP(O)(OEt)$_2$

**SYNFACTS Contributors:** Paul Knochel, Nadja M. Barl

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