E. J. COREY*, G. H. POSNER (HARVARD UNIVERSITY, CAMBRIDGE, USA) Selective Formation of Carbon–Carbon Bonds between Unlike Groups Using Organocopper Reagents *J. Am. Chem. Soc.* **1967**, *89*, 3911–3912.

The Corey–House Reaction: An Early Transition-Metal-Mediated Cross-Coupling

Significance: In 1967, Corey and Posner reported a simple method for carbon–carbon cross-coupling using the previously reported Gliman cuprates of type R₂CuLi. In Corey's original publication Me₂CuLi was generated by adding MeLi to cuprous halides. The resulting dimethylcuprate was used for cross-couplings with alkyl, alkenyl, or aryl bromides and iodides to form the corresponding methylated products. *trans*-1-Bromo-2-phenylethylene was stereospecifically converted into *trans*-1-phenyl-propene. In a similar fashion formation of *cis*-1-phenylpropene was observed from *cis*-1-bromo-2-phenylethylene.

Comment: In 1969 Whitesides, House, and coworkers contributed significantly to the scope of the coupling reaction by using lithium aryl-, *sec*-alkyl and *tert*-alkyl cuprates as coupling partners for the organic halides (G. M. Whitesides, W. F. Fischer Jr., J. San Filippo Jr., R. W. Bashe, H. O. House *J. Am. Chem. Soc.* **1969**, *91*, 4871). Thus, the cross-coupling reaction of Gilman cuprates with organyl halides is known as the Corey–House reaction. Variations of the name including Whitesides and Posner are also in use.

SYNFACTS Contributors: Paul Knochel, Johannes H. Harenberg Synfacts 2020, 16(04), 0437 Published online: 18.03.2020 **DOI:** 10.1055/s-0040-1707676; **Reg-No.:** P03020SF

Metals in Synthesis

Key words

Corey-House reaction

Gilman cuprates

C-C cross-coupling

