

Correction to Synthesis of Heterocycles via Pd-Ligand Controlled Cyclization of 2-Chloro-*N*-(2-vinyl)aniline: Preparation of Carbazoles, Indoles, Dibenzazepines, and Acridines

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Supporting Information

We recently reported a synthesis of carbazoles (**8**), acridines (**9**), and dibenzazepines (**1**) from common precursor **7** via Pd-catalysis. The catalyst based on **L2** gave exclusively **1**, while catalysts based on **L3** and **L4** selectively formed **8** and **9**, respectively (Figure 1).

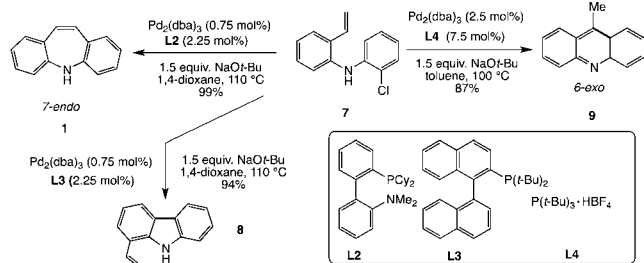


Figure 1. Previously reported ligand-controlled cyclizations of 2-chloro-*N*-(2-vinyl)aniline (**7**).

Upon re-examination of both the Pd-**L3** and Pd-**L4** catalyst systems, we have found that these systems are not 100% selective as we previously reported. The reaction of **7** using **L3** gave **8** in 55% isolated yield (94% reported). The ¹H NMR spectrum of the crude reaction mixture showed **8**, **1**, and **9** in an approximate ratio of 1.0:0.25:0.20. This product distribution was largely insensitive to temperature (90–110 °C range) and other tested variables.

The reaction of **7** using **L4** gave **9** in 45% isolated yield (87% reported). The ¹H NMR of the crude reaction mixture showed **9**, **1**, **8**, and a previously unidentified compound in an approximate ratio of 1.0:0.18:0.05:0.60. The latter was identified as dimer **2** (X-ray). Again, the product ratio was insensitive to slight variations in the reaction conditions.

The reaction of **7** using **L2** furnished dibenzazepine **1** in 80% isolated yield (99% reported) and with good selectivity (~90%) by ¹H NMR analysis of the crude reaction mixture. The one-pot conversion of 2-chloroaniline and 2-bromostyrene to **1**

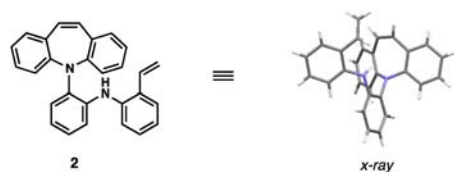


Figure 2. Dimeric dibenzazepine side product **2** (see Supporting Information).

(Table 1 in original manuscript) occurred in 70% isolated yield (99% reported).

In summary, the formation of **1** from **7** is largely selective, but the yields may be somewhat lower than what is reported. The reactions that form **8** and **9**, in contrast to what we originally reported, form mixtures of products with the major isomer being the one indicated in our published manuscript. The supposition that catalysts based on **L2–L4** each produce a single product is not correct. We apologize for these errors and for any inconvenience to others that this may have caused. We thank Drs. Thomas Maimone and Meredith McGowan for their invaluable assistance.

ASSOCIATED CONTENT

Supporting Information

Experimental details for the preparation and characterization of **2**. This information is available free via the Internet at <http://pubs.acs.org>.

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