C. CHEN, P. M. PFLÜGER, P. CHEN, G. LIU* (SHANGHAI INSTITUTE OF ORGANIC CHEMISTRY, P. R. OF CHINA AND WILHELM’S-UNIVERSITÄT MÜNSTER, GERMANY)
Palladium(II)-Catalyzed Enantioselective Aminotrifluoromethoxylation of Unactivated Alkenes using CsOCF₃ as a Trifluoromethoxide Source

**Palladium-Catalyzed Enantioselective Aminotrifluoromethoxylation of Alkenes**

**Significance:** The authors reported an asymmetric palladium(II)-catalyzed aminotrifluoromethoxylation of unactivated alkenes leading to a variety of enantioenriched piperidines in good yields.

**Comment:** Remarkably, the method was used to prepare a derivative of pridinol, an antiparkinsonian and anticholinergic drug, in three steps and 62% overall yield. The mild reaction conditions and the use of CsOCF₃ salt make the method practical.

**Selected examples:**

- **PG = Ts, DMPs, TMPs, PMPs, o-Ns, o-Ns, Bz**
- **R¹, R² = Alk, Ar, ether, amine, alkene**

<table>
<thead>
<tr>
<th>R¹</th>
<th>R²</th>
<th>PG</th>
<th>Ligand</th>
<th>CsOCF₃ (4.0 equiv)</th>
<th>SelectFluor® (1.2 equiv)</th>
<th>CH₂Cl₂–MeCN (5:1)</th>
<th>–30 °C, 36 h</th>
<th>Up to 97% ee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Et</td>
<td>Et</td>
<td>DMPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>76% yield, 89% ee</td>
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<tr>
<td>NHPG</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td>76% yield, 89% ee</td>
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<td>76% yield, 89% ee</td>
</tr>
</tbody>
</table>

**Synthetic application:**

- **57% yield, 96% ee**
- **5 steps**
- **pseudonorharman derivative (62% yield, 96% ee)**

**SYNFACTS Contributors:** Paul Knochel, Juri Skotnitzki
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