Stereoselective Synthesis of α-Aryl Amino Acids

**Significance:** Quaternary amino acids play an important role as modifiers of peptide conformation and bioactivity. The authors describe an α-arylation of enantiopure amino acid precursors to form quaternary centers.

**Comment:** This KHMDS-mediated α-arylation of enantiopure amino acid precursors proceeds smoothly to provide quaternary amino acids in high yields and without significant loss of stereochemical integrity.

**Selected examples:**

- **R-Selective route:**
  - 95% yield, er > 99:1
  - 98% yield, er > 99:1
  - 98% yield, dr = 91:9
  - 83% yield, er > 99:1
  - 73% yield, er > 99:1

  *Note:* LiNEt₃ used instead of KHMDS.

- **S-Selective route:**
  - 80% yield, er > 99:1
  - 80% yield, er > 99:1
  - 95% yield, er > 99:1
  - 76% yield, er > 99:1
  - 56% yield, er = 95:5

  *Note:* D-phenylglycine was used as starting material.