A Heterogeneous Palladium Catalyst for C2-Selective Arylation of Indoles


**Comment:** The reactions of an electron-rich indole (3b), an N-methylated indole (3d), para-alkyl-substituted salts (3f,g), or an electron-deficient CF₃-substituted salt (3j) afforded high yields, whereas an N-benzylated indole (3e) or a naphthyl salt (3i) resulted in lower yield. ICP-OES analysis showed 0.6 ppm of palladium leaching from the reaction mixture (3a).

**Selected results:**

- **3a**
  - R¹ = H, R² = H, Ar = Ph
  - r.t., 6 h, 91% yield

- **3b**
  - R¹ = MeO, R² = H, Ar = Ph
  - 40 °C, 6 h, 86% yield

- **3c**
  - R¹ = NO₂, R² = H, Ar = Ph
  - 50 °C, 25 h, 70% yield

- **3d**
  - R¹ = H, R² = H, Ar = Ph
  - r.t., 6 h, 80% yield

- **3e**
  - R¹ = H, R² = MeC₆H₄Ar = Ph
  - 50 °C, 24 h, 65% yield

- **3f**
  - R¹ = H, R² = H, Ar = 4-MeC₆H₄
  - 40 °C, 6 h, 83% yield

- **3g**
  - R¹ = H, R² = H, Ar = 4-t-BuC₆H₄
  - r.t., 15 h, 84% yield

- **3h**
  - R¹ = H, R² = H, Ar = 2-MeC₆H₄
  - 40 °C, 6 h, 76% yield

- **3i**
  - R¹ = H, R₂ = H, Ar = Np
  - 40 °C, 15 h, 67% yield

- **3j**
  - R¹ = H, R₂ = Me, Ar = 4-F₃CC₆H₄
  - 40 °C, 15 h, 99% yield

- **3k**
  - R¹ = H, R₂ = Me, Ar = 4-MeOC₆H₄
  - 40 °C, 6 h, 72% yield

**SYNFACTS Contributors:** Yasuhiro Uozumi, Yoichi M. A. Yamada, Rikako Ishii

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Polymer-Supported Synthesis

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