

Supporting Information

BF₃·Et₂O-Catalyzed Formal [3+2] Reaction of Aziridinofullerenes with Carbonyl Compounds

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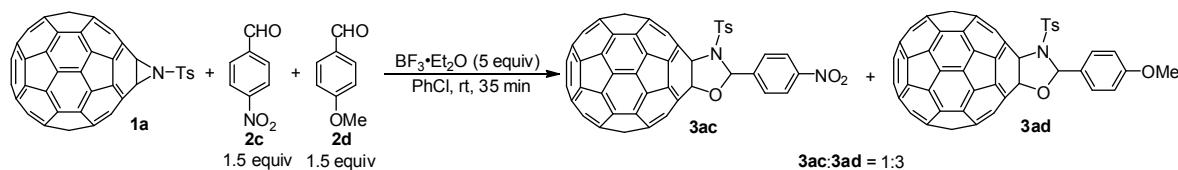
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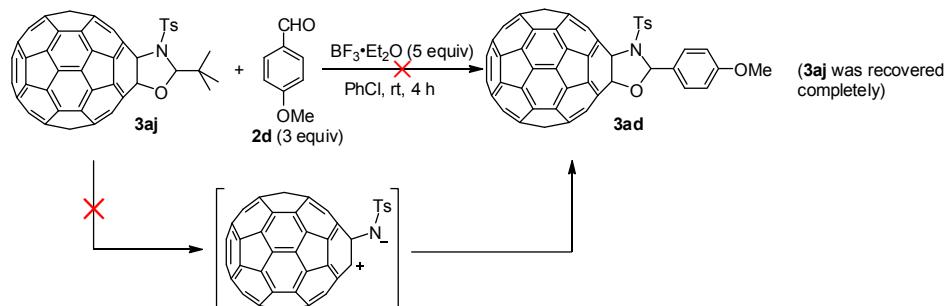
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1. The competitive reaction between 4-nitrobenzaldehyde (**2c**) and 4-methoxybenzaldehyde (**2d**).



Aziridinofullerene **1a** (17.8 mg, 0.02 mmol), 4-nitrobenzaldehyde **2c** (4.5 mg, 0.03 mmol), and 4-methoxybenzaldehyde **2d** (4.1 mg, 0.03 mmol) were dissolved in 2.5 mL of dry chlorobenzene. Then, $\text{BF}_3 \cdot \text{Et}_2\text{O}$ (0.1 mmol) was added to the solution, and the mixture was stirred at room temperature until the disappearance of **1a** as determined by TLC. The solvent was evaporated *in vacuo*, and the residue was purified on a silica gel column using CS_2 /toluene as the eluent. The products **3ac** and **3ad** were collected together for ^1H NMR analysis, which indicated the molar ratio of **3ac:3ad** is about 1:3.

2. The reaction between **3aj** and **2d** in the presence of $\text{BF}_3 \cdot \text{Et}_2\text{O}$.



Fullerooxazolidine **3aj** (0.02 mmol) and 4-methoxybenzaldehyde **2d** (8.2 mg, 0.06 mmol) were dissolved in 2.5 mL of dry chlorobenzene. Then, $\text{BF}_3 \cdot \text{Et}_2\text{O}$ (0.1 mmol) was added, and the mixture was stirred at room temperature for 4 h. The TLC determination indicated no reaction occurred (**3aj** has a less polarity than **3ad** on TLC), which proved that the $\text{BF}_3 \cdot \text{Et}_2\text{O}$ -catalyzed formal [3+2] reaction of aziridinofullerenes with carbonyls was irreversible.

