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Total Synthesis of (+)-Azaspiracid-1. Part II: Synthesis of the EFGHI Sulfone and Completion of the Synthesis
Angew. Chem. Int. Ed. **2007**, 46, 4698-4703.

Synthesis of (+)-Azaspiracid-1

Significance: (–)-Azaspiracid 1 is a neurotoxin associated with seafood poisoning. The synthesis of the (+)-enantiomer depicted features the deft use of metallated sulfones in two of the key fragment linkage reactions (**A+B**) and (**E+F**) and the use of BOX catalysts **J**, **K**, and **L** in the synthesis of fragments **F**, **G**, **I**, and **H**, respectively.

Comment: A preceding paper (*Angew. Chem. Int. Ed.* **2007**, 46, 4693) described the synthesis of fragment **A**. The entire synthesis required only 27 linear steps and gave the target in 2.7% overall yield. The first synthesis of (–)-azaspiracid-1 in 39 linear steps was reported by Nicolaou et al. (*Angew. Chem. Int. Ed.* **2004**, 45, 2609).

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Category

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Key words

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glyoxylate-ene reaction

directed aldol reaction

cross-metathesis

SYNFACT
of the month

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