## Category

Synthesis of Natural Products and Potential Drugs

## **Key words**

pinnatoxin A

Ireland-Claisen rearrangement

asymmetric 1,2-addition

spiroacetals

macrocycles



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Total Synthesis of (+)-Pinnatoxin A

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## Synthesis of (+)-Pinnatoxin A

**Significance:** (+)-Pinnatoxin A is a neurotoxin found in the *Pinna* shellfish species, presumably acting as a calcium-channel activator. The present study concentrates on a new approach towards ring G using an Ireland–Claisen rearrangement to establish the C5 and C31 stereogenic centers.

Comment: A was synthesized from D-ribose.

Deprotonation of **E** using chiral amide **F** followed by treatment with TMSCI furnished silylketene acetal **G** which underwent stereoselective [3,3]-sigmatropic rearrangement upon warming to room temperature.

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