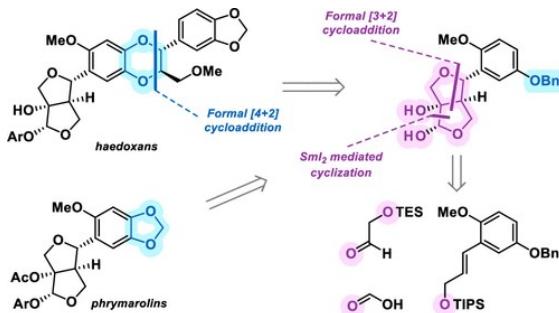
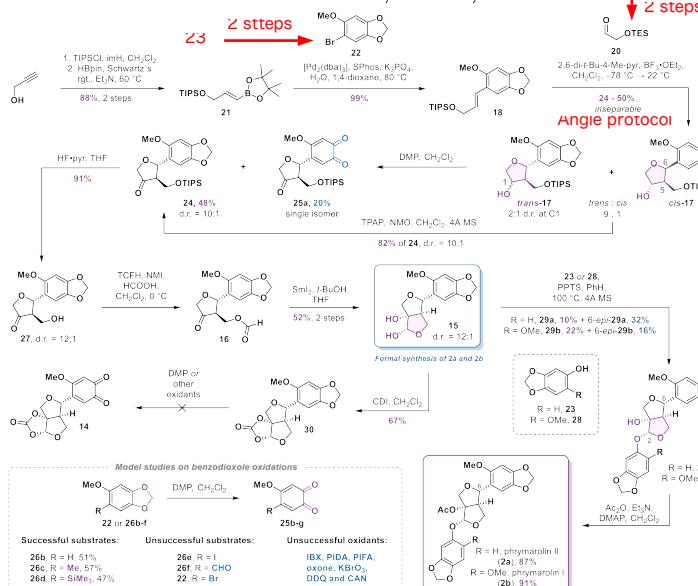


Unified Total Synthesis of Phrymarolin and Haedoxan Natural Products

Jan Paciorek, Antoine D. F. Guy, Alexander Sudau, David M. Barber, and Thomas Magauer*

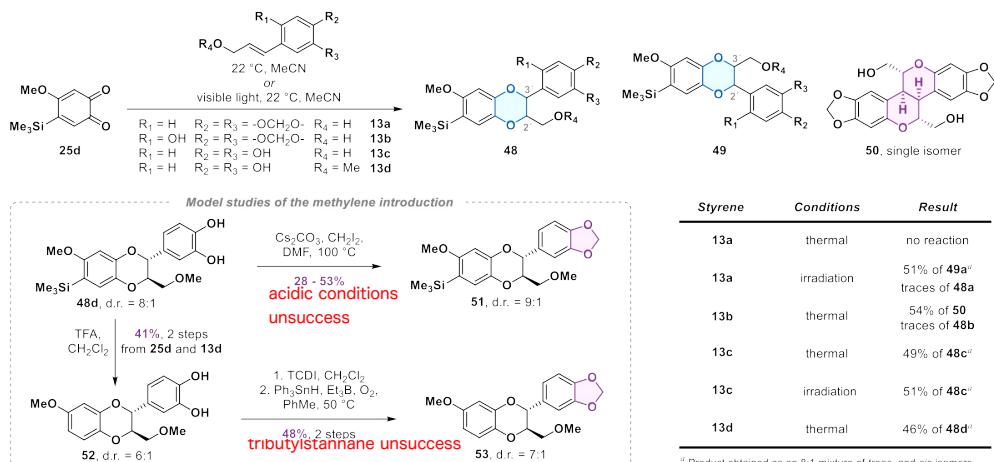
Journal of the American Chemical Society 2025, 147, 50,

turutarin lignans: 3, 7-dioxa[3.3.0]bicyclooctane ring system,



Scheme 3. Improved Synthesis of the Eurofuran Core and Alternative Route to Phrymarolins

Scheme 4. Model Studies of the Formal [4 + 2] Cycloaddition and Methylenation



Styrene	Conditions	Result
13a	thermal	no reaction
13a	irradiation	51% of 49a ^a traces of 48a
13b	thermal	54% of 50 traces of 48b
13c	thermal	49% of 48c ^a
13c	irradiation	51% of 48c ^a
13d	thermal	46% of 48d ^a

^a Product obtained as an 8:1 mixture of *trans*- and *cis*-isomers.

Scheme 5. Total Synthesis of Haedoxans A and D

