AK Gaich — Problem Set (25/02/2013)

1. Assign a probable mechanism to the following transformation including an explanation for the steriochemical outcome.

Org. Lett. **2012**, *14*, 6048.

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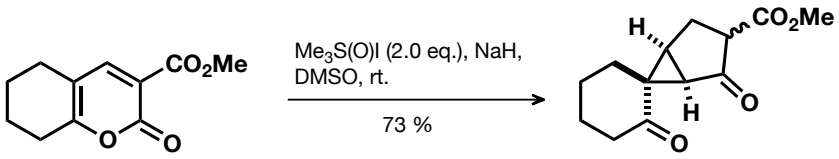

2. Explain the outcome of the reaction (synthesis of (±)-Spiniferin-1). Which special features has the natural product?

J. Org. Chem. **2011**, *76*, 1495.

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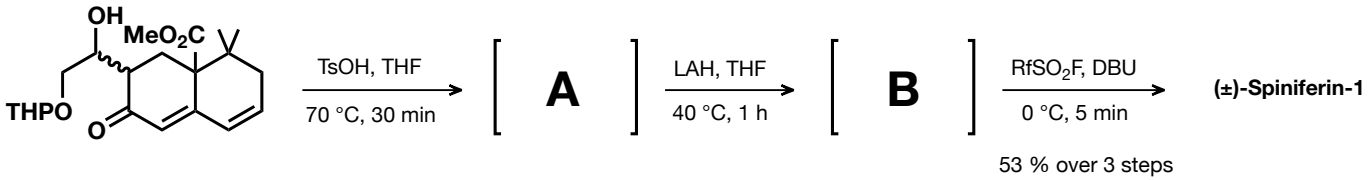

5*H*-3-oxa-octafluoropentanesulfonyl fluoride ($RfSO_2F$ = $HCF_2CF_2OCF_2CF_2SO_2F$): *Tet. Lett.* **2009**, *50*, 2727.

3. Mechanism for this transformation?

Tet. Lett. **1974**, *15*, 1597.

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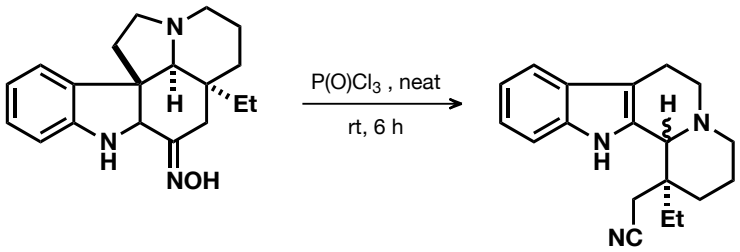

4. Assign a probable mechanism to the following transformation.

J. Org. Chem. **2000**, *65*, 4261.

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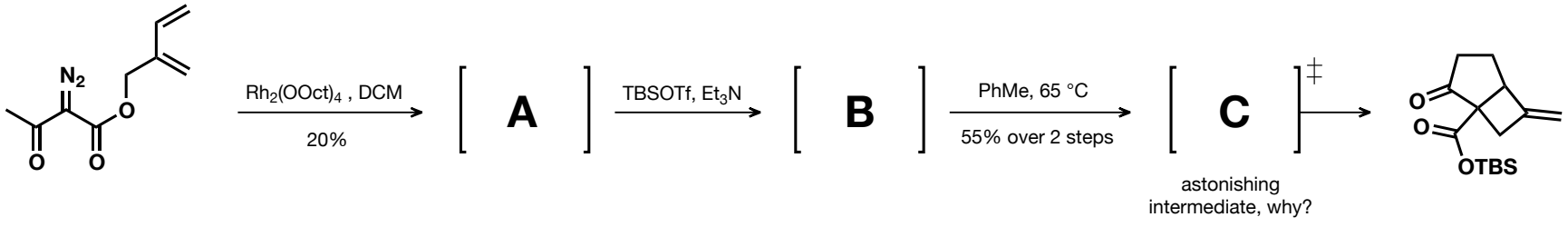

5. Assign a probable mechanism to the following transformation.

J. Am. Chem. Soc., **1995**, *117*, 10413.

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6. Total Synthesis of Isochrysohermidin (enjoy Diels–Alder reactions)

Boger, *J. Am. Chem. Soc.* **1993**, *115*, 11418.

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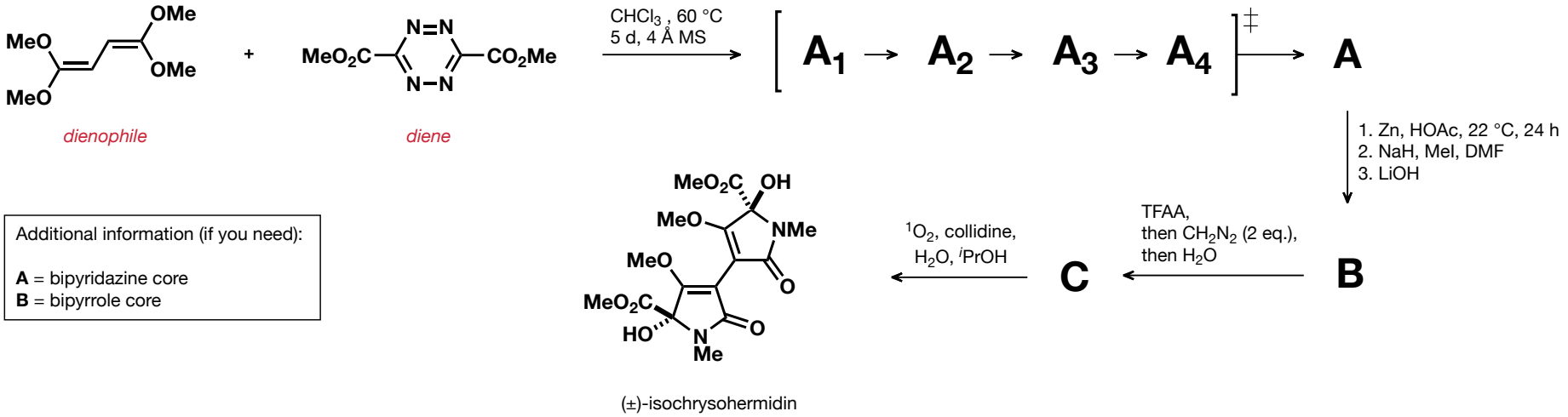

Additional information (if you need):

A = bipyridazine core
B = bipyrrole core

7. Assign a probable mechanism to the following transformation.

Funk, *Org. Lett.*, **2006**, *8*, 3995.

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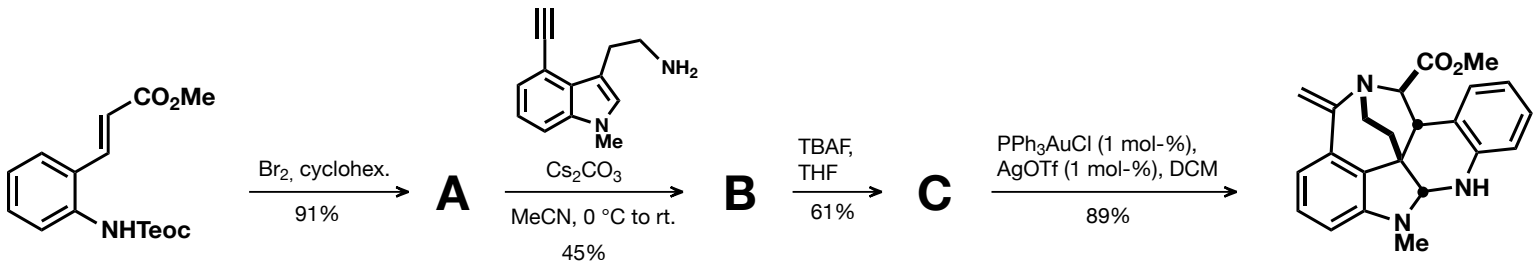

Additional problem sets:

A1. Draw a mechanism for the formation of the tricyclic compound.

Lee, *Angew. Chem. Int. Ed.,* **2008**, *47*, 4009.

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