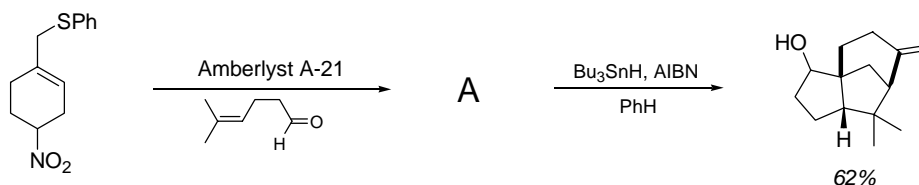


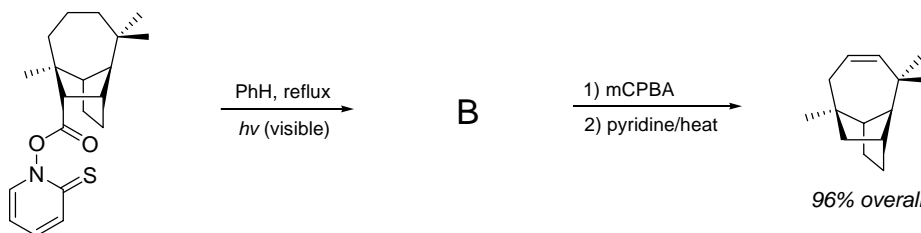
Mechanisms Club #1 - August 19, 2005

Radicals Rule

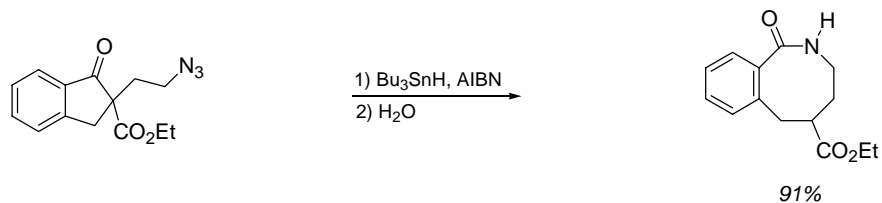
1. Warm up, especially for the first years who I know have seen this in Sorensen's class. Please provide a detailed arrow pushing mechanism for this dazzling transformation en route to cedrene. (Amberlyst A-21 is a basic anion exchange resin) *TL* **1993**, 34, 2961.



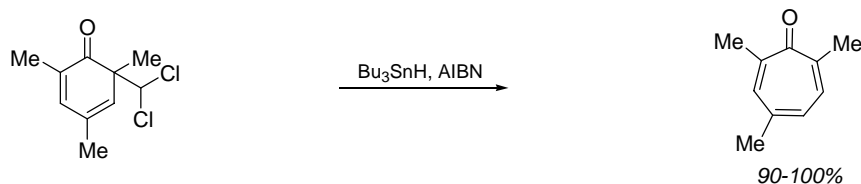
2. One thing to always keep in mind with radical reactions - expect the unexpected! The Barton decarboxylation allows the replacement of a carboxy function by a pyridyl-sulfide group ( $\text{RCOOH} \rightarrow \text{RSPy}$ ). Provide a mechanism accounting for this highly efficient transformation of an isolongifolic acid derivative. *TL* **1990**, 31, 2501.



3. Provide a detailed mechanism for this transformation highlighting a useful (underutilized?) radical-mediated strategy for large ring construction. *JACS* **1993**, 115, 3328.



4. Please provide an arrow-pushing mechanism for this remarkably efficient synthesis of tropones. How did they make the starting material? *Tetrahedron* **1984**, 43, 5031.



Next meeting 9/2/05