One difficulty associated with handling "this" substance is that it undergoes a prototropic shift to afford the more stable hydrazone. Illustrate this process, when acid catalyzed, and formulate a mechanism under these conditions.

1,3-Cycloheptatriene undergoes a thermally promoted electrocyclization.
[a] Formulate the reaction of PTAD with the electrocyclization product. Pay particular attention to stereochemistry.
[b] Show how to convert that substance to A [JACS, 91, 777].

What's wrong with the following plan?