**Problem Set (Nwachukwu)**

1. Suggest a mechanism for the reaction below.



Zhao, T.; Xu, B. *Org. Lett*. **2010**, *12*, 212-215.

1. Boruah and co-workers developed and efficient cascade reaction to access pyrido[2,3-*d*]pyrimidines. Provide a mechanism for this cascade reaction.



Saikia, P.; Sharma, G.; Gogoi, S.; Boruah, R. C. *RSC Adv.* **2015**, *5*, 23210-23212.