Diffraction Study of Recyclization of Oxazolopyridinium Salts to Indolizines

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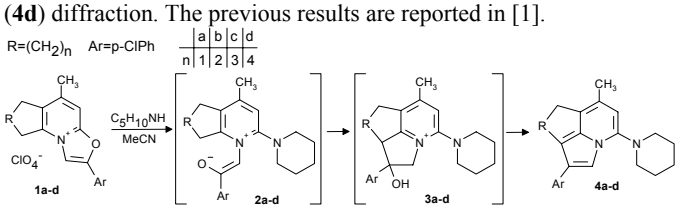
In the course of our systematic study of structure/reactivity relationships for heterocycles, the reaction of recyclization of oxazolo[3,2-*a*]pyridinium salts with annelated cycloalkane fragments of different size revealed some unexpected peculiarities. All obtained compounds were studied by single crystal (**1a-d**, **3c**, **4b,c**) or powder (**4d**) diffraction. The previous results are reported in [1].



As discovered earlier, compounds **1b,d** easily gave corresponding indolizines **4b,d**. In the case of compound **1c** the reaction suddenly stopped at the non-predicted intermediate **3c** (with ClO_4^- anion). It can be explained by the less distortion of 7-membered ring connected to a non-planar bicycle than in **4c**. Dehydratation of **3c** led to **4c**. Compound **1a** was also attacked by piperidine, but only resin was formed. In this case, the unstable intermediate **2a** is unable to react further because compounds **3a** and **4a** have high angle distortions as the AM1 molecular model shows.

[1] *Acta Cryst.*, 2004, **E60**, o1096-o1097, o1301-o1302, o2313-o2314.

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