

A CYCLIZATION METHOD TO 4-SUBSTITUTED-2-CYCLOHEXENONES WITHOUT THE LOSS OF OPTICAL ACTIVITY. Tania I. Houjeiry, Sarah L. Poe^{*}, D. Tyler McQuade. Department of Chemistry and Biochemistry, Florida State University, 93 Chieftan Way, Tallahassee, Fl 32306. ^{*}Department of Chemistry and Chemical Biology, Cornell University, Ithaca, NY 14853.

Recently, Nicolau and Baran independently synthesized optically active 4-substituted-2-cyclohexenones using base mediated Robinson-like cyclization. Their strategy is an efficient and rapid approach to these common intermediates. Thus far, the base mediated cyclization has only been demonstrated for ketoaldehydes where the R-group is branched. Herein, we demonstrate that for unbranched R-groups, the base mediated cyclizations result in erosion of optical activity and we provide both a mechanistic justifications for this erosion and a set of neutral-organocatalyzed conditions that enable cyclization while retaining optical activity.