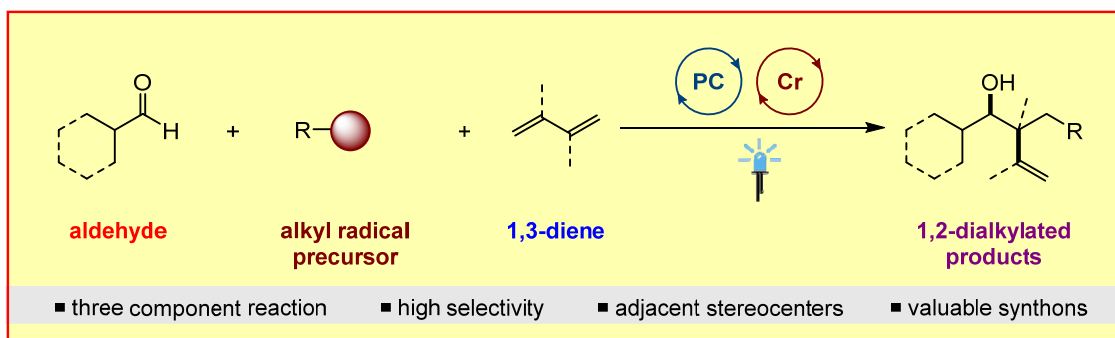


DIALKYLATION OF 1,3-DIENES BY DUAL PHOTOREDOX AND CHROMIUM CATALYSIS

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1,3-Dienes are important raw materials in the chemical industry and are produced in a multi-ton scale every year.¹ Direct conversion of commercially available 1,3-dienes into valuable compounds via catalytic strategies is of high interest. Furthermore, the selective difunctionalization of unactivated 1,3-dienes, especially via radical processes, is still an ongoing challenge.² Here we describe a three component cross-coupling dialkylation of 1,3-dienes that merges photoredox and chromium catalysis for the first time.³ A variety of homoallylic alcohols could be obtained in good to excellent yields and with very high diastereo-control. Additionally, the methodology could be extended to the preparation of enantioenriched products by using a chiral ligand for the chromium catalyst.



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