**Photoredox-Initiated frontal ring-opening metathesis polymerization**

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In this work, we report the development and optimization of a photoredox-initiated frontal ring-opening metathesis polymerization (FROMP) system. We found that a thermally latent ruthenium based, bis-NHC complex efficiently catalyzes FROMP after photo-activation with 9-mesityl-10-phenylacridindium tetrafluoroborate, copper(II) triflate, and a 455 nm light source. In this unique strategy, we initiate FROMP by inducing a photoredox event at the catalyst activator (i.e., Cu) rather than the catalyst itself. Variations in Cu or metathesis catalyst loading provided polymerization fronts with velocities ranging from 0.15-0.43 mm s-1 and front temperatures ranging from 140-205 °C. While the Tg of the resultant polymers are lower than those derived with Grubbs' second-generation catalyst (GC2), we believe that this catalyst provides resins resistant to background polymerization with extended pot lives. Indeed, we observed that two-component systems were viable towards for FROMP for up to 5 days, a marked improvement of the 30 h working window demonstrated by GC2.

