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## A rational molecular design of an efficient visible-light organic photoredox catalyst for light driven controlled radical polymerization

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Visible light photoredox catalysis, formerly inaccessible redox-neutral reaction scaffolds, has enabled significant development of radical chemistry in organic and polymer synthesis. So far, most progress in this field has been made with transition metal complexes, yet several aspects of current transition-metal photoredox catalysis still remain important challenges. Although organic photoredox catalysis has been recently investigated as an attractive alternative of transition metal catalysis, only limited class of organic dyes has been employed as organic catalysts. In this presentation, I will discuss about a rational molecular design for an efficient visible-light organic photoredox catalysts with the broad diversity in structure and properties. Also, I will talk about their synthetic applications for light-driven controlled radical polymerization.

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