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Gelation of Copolymers Photo-crosslinked by Pendent Benzophenones SCOTT CHRISTENSEN, RYAN C. HAYWARD, UMass - Amherst Polymer Science and Engineering — Copolymers containing pendent benzophenone (BP) groups provide a simple and powerful route to crosslinkable polymer films. While the solution state photochemistry of BP is well established, and crosslinking of polymers blended with BP has been studied in detail, the process of crosslinking by covalently attached BP has received comparatively little attention. We have prepared copolymers of BP with several different monomers, and studied gelation as a function of BP content and degree of photochemical conversion. Understanding the influence of polymer chemistry on crosslinking efficiency allows the appropriate choice of materials for nanostructured photo-crosslinkable polymer films and reactive polymer blends.

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