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Comb Block Polyolefins

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Examples of crystallizable comb block polyolefins seem to be rare in spite of the significant opportunity they pose to explore structure-property relationships of new block topologies accessible by this route. In this talk we will focus on a new strategy for making comb block polyolefins. We will illustrate the approach using esterification of commercial ethylene acrylic acid copolymer (EAA such as $\mathrm{Escor}^{TM}5100$; a high pressure, free radical initiated product) with three atactic polypropylenehydroxide macromonomers (aPPOH; $\mathrm{M_n}$ 1, 3, and 7k). The quantity of aPPOH in the products ranges from 13 to 60 wt%. These pure products and selected blends containing them have been characterized. Findings from these experiments will be shared.