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Local Conversion model for Phase Diagrams and Calorimetric properties of gel-forming LCST-type polymers. FRANCISCO SOLIS, ASU West, BRENT VERNON, Arizona State University — Assuming a sharp internal conversion of the properties of monomers in a polymer system, we derive the phase diagrams and calorimetric properties of gel-forming LCST-type (lower critical solution temperature) polymers. The transition models the release of water molecules associated with the polymer backbone. After the release, monomers are free to associate and form gel structures. We compare these results with properties of experimentally studied systems.

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