

## Some Aspects of Stimuli Responsive Polymers and their Applications

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### Abstract

Our past and recent work on stimuli responsive polymers including micellar self-assembles and hydrogels will be discussed. Systems to be discussed include those respond to single, dual or multiple stimuli, such as temperature, pH, photo-irradiation, and CO<sub>2</sub>. Both naturally occurring and synthetic polymers are included. Discussion is mainly focused on water treatment and related applications such as water disinfection and desalination. Some of the materials have been explored for other applications including energy and sustainability.

**Keywords:** Stimuli responsive system; structure; applications