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Stimuli Responsives of Crosslinked Poly on 2-HydroxyEthyl MethAcrylate – Optimization of Parameters by Experimental Design

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Abstract : Stimuli-responsive materials based on UV crosslinked acrylic polymer networks are fabricated. A various kinds of polymeric systems, hydrophilic polymers based on 2-Hydroxyethyl methacrylate have been widely studied because of their ability to simulate biological tissues, which leads to many applications. The acrylic polymer network PHEMA developed by UV photopolymerization has been used for dye retention. For these so-called smart materials, the properties change in response to an external stimulus. In this contribution, we report the influence of some parameters (initial composition, temperature, and nature of components) in the properties of final materials. Optimization of different parameters is examined by experimental design.

Keywords : UV photo-polymerization, PHEMA, external stimulus, optimization
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