

Drug Delivery Systems based on hydrogels

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Gel systems have found extensive applications in the medicinal/pharmaceutical field because of their ease of preparation, ability for modifications, and responsiveness to external chemical or physical stimuli. Gels usually act as hosts for active pharmaceutical agents for a variety of pathological conditions. They function as controllers of the release of pharmaceuticals that have proven to be “problematic” because they are either unsuitably insoluble to biological fluids, or they are metabolized unacceptably rapidly. In this presentation the use of silica-based hydrogels as controlled release drug delivery systems will be discussed, with emphasis on drugs against osteoporosis.