The applications of shape memory gel as a smart material

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The research to find a suitable future new material is a big challenge nowadays. The material for biocompatible or biodegradable is an important issue in human life. The environment friendly materials or in other words green materials are required for future applications. The gels are soft and wet material having several unique properties such as high water absorbent, extremely low friction, softness, shape memory, high ductility and so on. The gel consists with a large amount of solvent and a small amount of cross-linker. Due to the high water content, for instants, more than 90%, this material becomes as an environment friendly green material. Several gel materials have been developed by different groups including ours. The shape memory gel (SMG) is one kind of soft materials among them which bears some interesting characteristics. This gel, a smart material, can be used as lens, eyeball, artificial muscle or artificial blood vessel, smart button and so on [1-2]. In this paper, we have briefly discussed the different applications of the shape memory gel.


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Figure: The application of shape memory gel in different fields.