



**The Chinese University of Hong Kong**  
**Non-confidential Abstract of Technology Disclosure**

---

**Title:**

Polymer Gel Composition and Uses Therefor

**CUHK Ref. No.:**

96/SCI/015

**Inventor:**

Professor Chi WU, Department of Chemistry

**Patent Status:**

- ◆ US Patent no. 6,030,634
- ◆ US Patent no. 6,238,688
- ◆ Chinese Patent no. ZL97180823.6
- ◆ HK Standard Patent no. HK1025585

**Non-confidential abstract:**

The present invention generally relates to thermally responsive polymer gel compositions that have enhanced temperature-dependent shrinking rates, increased strength, and improved pliability over previously known polymer compositions. In particular, the compositions are thermally responsive polymer gel compositions comprising a hydrophobic polymer matrix and an interpenetrating hydrophilic polymer network disposed therein, such that the resulting polymer gel composition has enhanced thermal responsiveness relative to the hydrophobic polymer matrix alone. This combination results in polymer gels having these improved properties. In a particular aspect, the hydrophobic polymer matrix is poly(n-isopropylacrylamide) ("PNIPAAM") and the interpenetrating polymer network is supplied by incorporation of an amount of protein, typically gelatin, within the PNIPAAM.

**Potential Applications:**

The compositions of the invention find particular use in surgical applications for the repair of damaged tissues, e.g., blood vessels, neurons, and the like, and in temperature-dependent drug delivery systems.

---

**For further queries, please contact:**

Mr Billy Lam  
Technology Licensing Coordinator  
*Tel:* (852) 2609 8882  
*Fax:* (852) 2603 5451  
*Email:* [billylam@cuhk.edu.hk](mailto:billylam@cuhk.edu.hk)

*Address:*  
Technology Licensing Office  
The Chinese University of Hong Kong  
Room 226, Pi Ch'iu Bldg, Shatin, New Territories  
Hong Kong SAR