The use of radiation sensitive gels for dosimetry measurements was first suggested in the 1950s. However, gel dosimeters did not come into wide clinical use because of difficulties in evaluating the dose information. In the 1980s interest in gel dosimeters was revived because of the ability provided by magnetic resonance imaging to display dose information in three dimensions. In this symposium we will review the development of gel dosimetry from the early days and discuss the potential for routine direct three dimensional radiation dosimetry with gels. The speakers will review the fundamentals of the major gel dosimeter systems including Fricke (ferrous sulphate) gels and polymer gels and will discuss recent developments of new gel dosimeters. The various probes for measuring the dose information stored in irradiated gels will also be presented. A panel discussion will provide the opportunity for speakers and the symposium audience to discuss selected topics of controversy in gel dosimetry.

**Outline of Session:**

Introduction to Gel Dosimetry and its Potential: Cheryl Duzenli  
Fricke Gel Systems: L. John Schreiner  
Polymer Gel Systems: Clive Baldock  
Panel Discussion: All Participants  
Closing Comments: Is there a role for gel dosimetry in radiation therapy? Geoffrey Ibbott