

Jayaraman, N. 2007, "Dendrimers and their use as nanoscale sensors", Rao, C. N. R.; Müller, A.; Cheetham, A. K. (Eds.): *Nanomaterials Chemistry. Recent Developments and New Directions*, Wiley-VCH, Weinheim, 2007, 249 – 298.

Dendritic macromolecules have firmly established their importance in a number of directions. The unimolecular constitution of dendrimers demands the synthesis to be multi-step in nature, which, in turn, demands that the chosen monomers and the reactions to be efficient. With increasing avenues for application, synthesis of dendrimers tailored for a desired purpose will become imminent and the knowledge available currently should guide the efforts in synthesis. Similarly, molecular modeling studies have become essential to understand the structure-property relationship of studies involving dendrimers, especially in the absence of atomic level details from solid state analysis. Anomalous properties of dendritic structures, such as intrinsic viscosities and fluorescence properties, will be useful while evolving new types of studies with dendrimers. With particular reference to chemical and biosensor investigations, the structural and architectural features of nanometric dendrimers have already been realized and exploiting dendrimers for the purpose of sensors has been phenomenal within last few years. In this respect, real time applications, reaching the field, are distinct possibilities in the near future.