

**BOTM: June 2008**

## **Dendritic Polyisobutylene-based Thermoplastic Rubber D\_Sibs**

Thermoplastic rubbers or elastomers (TPE) are recyclable materials. At room temperature they behave like rubber and stretch, while they can be melt-processed at higher temperatures just like plastics. One example, based on polyisobutylene, used in clinical practice as the drug-eluting polymeric coating (SIBS or Translute®) on the Taxus® coronary stent. This emerging biomaterial is precision synthesized by living carbocationic polymerization. The dendritic version of this material, D\_SIBS received US Patent protection in 2004. S\_DIBS can be produced with a wide range of molecular weight and composition, and has a better combination of properties than SIBS.

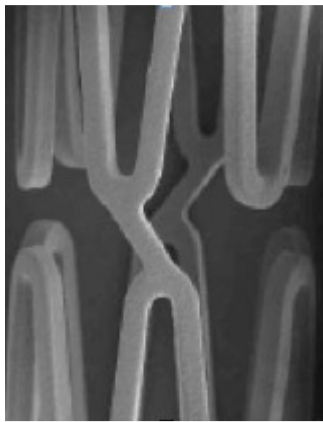


Figure 1 shows an example of coated stent. Coatings were remarkably uniform on both internal and external surfaces with no visible webbing. This month's biomaterial was provided by the Drug Delivery Special Interest Group.