Docket #: S10-035

METHODS FOR MAKING MULTI-BRANCHED POLYMERS

Stanford and IBM researchers have recently patented methods for making a new class of multi-branched macromolecules with well-defined molecular weights and surface structures. The patent describes the process for making a wide variety of complex co- and ter-polymers from a cyclic macroinitiator compound. These synthetic methods are both simple and versatile, and the clean and quantitative transformations at each polymerization step provide co- and ter-polymers with predictable molecular weights and end-group fidelity. These macromolecules generate nanostructured materials with properties that can be tailored for site-specific delivery of biologically active agents applicable for biomedicine.

Stage of Research:
This research is part of an ongoing collaborative effort between the Waymouth group at Stanford University and James Hedrick of IBM Almaden.

Applications

- **Biomedicine** - site-specific delivery of biologically active agents (e.g. anti-cancer therapeutics)

Advantages

- **Simple and versatile** methods disclosed
- **Highly targeted-** allows for site-specific delivery of biologically active agents
- **Novel-** describes a new class of multi-branched macromolecules with well-defined molecular weights and surface structures

Patents

- Published Application: 20100311917
- Issued: 8,013,065 (USA)

Innovators

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