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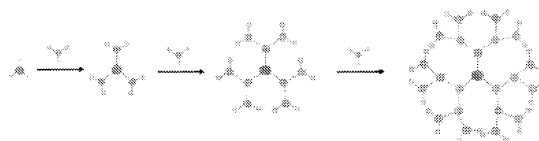
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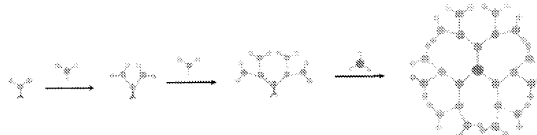
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(54) Title: POLY(ETHYLENE GLYCOL) BASED DENDRIMER-LIKE HYPERBRANCHED MACROMOLECULES, METHODS OF PREPARATION AND USE THEREOF

a) Divergent synthesis (core to dendron)



b) Convergent synthesis (dendron to core)



c) Combined divergent/convergent synthesis

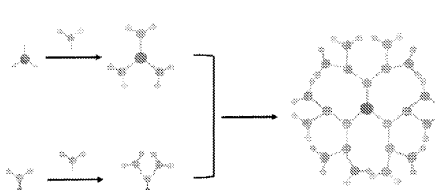


FIGURE 1

(57) Abstract: In certain embodiments, the present invention relates to dendrimer-like hyperbranched macromolecules for several uses such as medical or biopharmaceutical applications, or non- medical or industrial uses, such as antibody purification, cosmetic applications, catalytic applications, applications in electronics, agriculture, food, filtration and further applications. In embodiments, the present invention relates to a hyperbranched macromolecule for drug delivery, comprising polyethylene glycol (PEG) units and at least one active agent conjugated to the hyperbranched macromolecule. Further, methods for synthesizing, purifying and characterizing such hyperbranched macromolecules and methods of treatment of a medical condition such as treatment of an ocular disease are provided.

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