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ethynylphenyl)methylphenylsilane

L. Synthesis of Bis(4-ethynylphenyl)diphenylsilaneM. Synthesis of Bis(4-ethynyl-2-methylphenyl)-dimethylsilane; N. Synthesis of Bis(2,5-dimethyl-4-ethynylphenyl)-dimethylsilane; O. Diyne Polycyclotrimerization; P. Polymer Characterization; Q. Synthesis of Model Compounds 1,3,5- and 1,2,4-Triphenylbenzenes; R. Decomposition of Hyperbranched Polymers; S. Structural Simulation; V. Acknowledgments; VI. References; 3. Silole-Containing Conjugated Polymers; I. Introduction; II. Polymer Syntheses; III. Thermal Stability; IV. Photoluminescence; V. Electroluminescence; VI. Optical Limiting VII. ConclusionsVIII. Acknowledgments; IX. References; 4. Silica Polyamine Composites: Advanced Materials for Metal Ion Recovery and Remediation; I. Introduction; II. Relationships between Composite Characteristics and the Starting Materials Used; A. Wide-Pore Amorphous Silica; B. Particle Size and Back Pressure; C. Capacity, Longevity, and Polymer Molecular Weight; III. Comparison with Other Resin Technologies; IV. Structural Considerations; A. The Nature of the Polymer Graft to the Silica Surface; B. Polymer Structure and Metal Ion Coordination; C. Molecular Modeling Studies V. ApplicationsA. Metal Chromatography: Separation and Concentration of Multicomponent Metal Mixture from Acid Mine Drainage; B. Selective Recovery of Copper from Solvent Extraction Circuit Waste Streams of Acid Mine Leaches; C. Separation of Cobalt and Copper Using Two Different Polyamine Composites in Tandem Columns; D. Removal of Mercury from Waste Solutions Using Sulfur-Modified Silica-Polyamine Composites; VI. Future Work; VII. Acknowledgments; VIII. References; 5. Polyhedral Oligomeric Silsesquioxane (POSS) Polymers, Copolymers, and Resin Nanocomposites; I. Introduction II. Synthesis of Polyhedral Oligomeric Silsesquioxanes

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## Sommario/riassunto

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