Novel Lewis Acids for Polymerization

New analogs of alkylaluminoxanes have been developed by a pathway that does not involve hydrolysis. The starting materials are commercially available and cheap and the preparation of the MAO analogs is facile. Depending on their chemical composition, introductory experimentation has shown that these materials can function either as activators for metallocenes or Lewis acids for cationic polymerization. In the latter case the resultant materials show very high efficacy for polymerization of isobutene (exceeding the performance $AlCl_3$ in neat IB). To date none of these materials has proven to be pyrophoric. The materials appear to be stable for many months.

Cost = $40k (Stage 1)
Likelihood of Success = 9
Earning Potential = Moderate to High
Return on Investment = Royalty in exchange for IP rights, Terms Open to Negotiation.