

FIG. 1 HTHS vs. SSI values for linear EP references and inventive long chain branched ethylene copolymer lubricant compositions

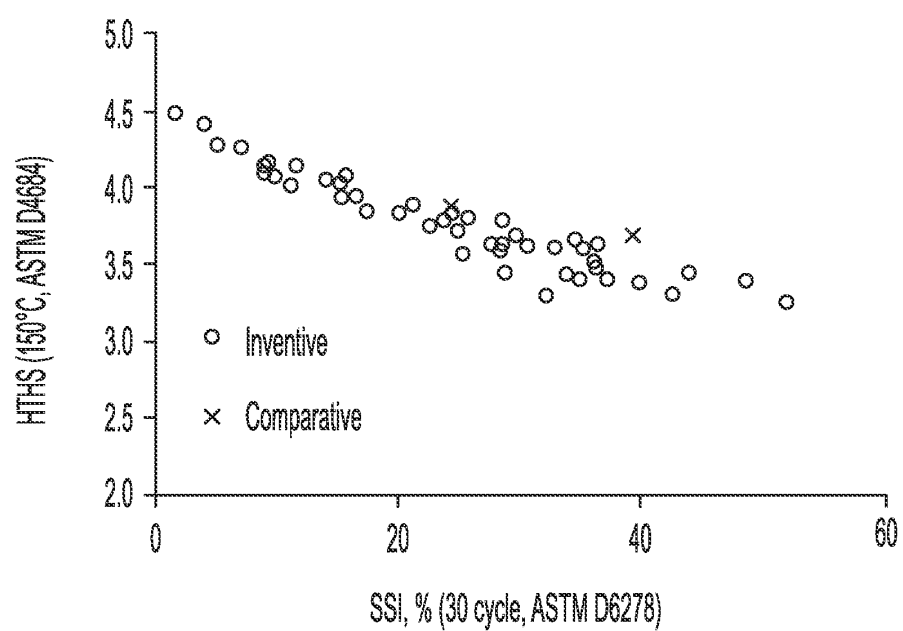


FIG. 2 Dynamic frequency sweep on neat polymers at 190°C for C1 and representative inventive long chain branched EP copolymers, respectively.

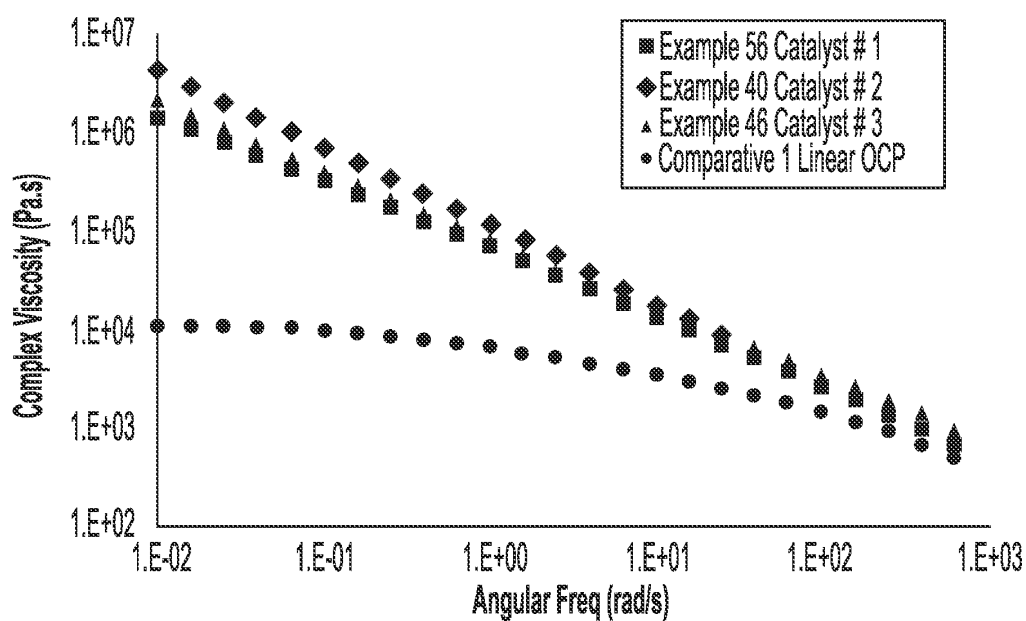


FIG. 3 HPLC projection of HPLC-SEC analysis on neat representative inventive EP copolymers

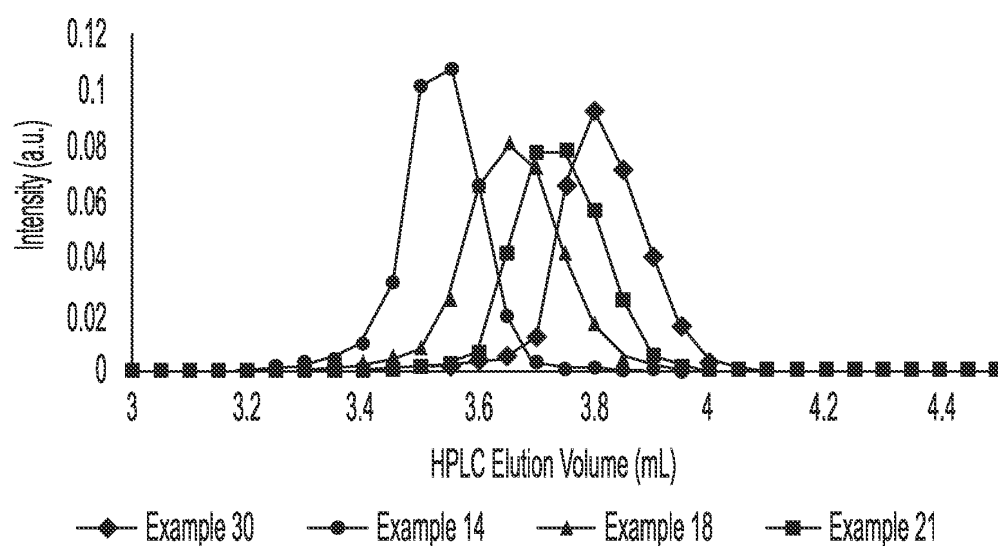


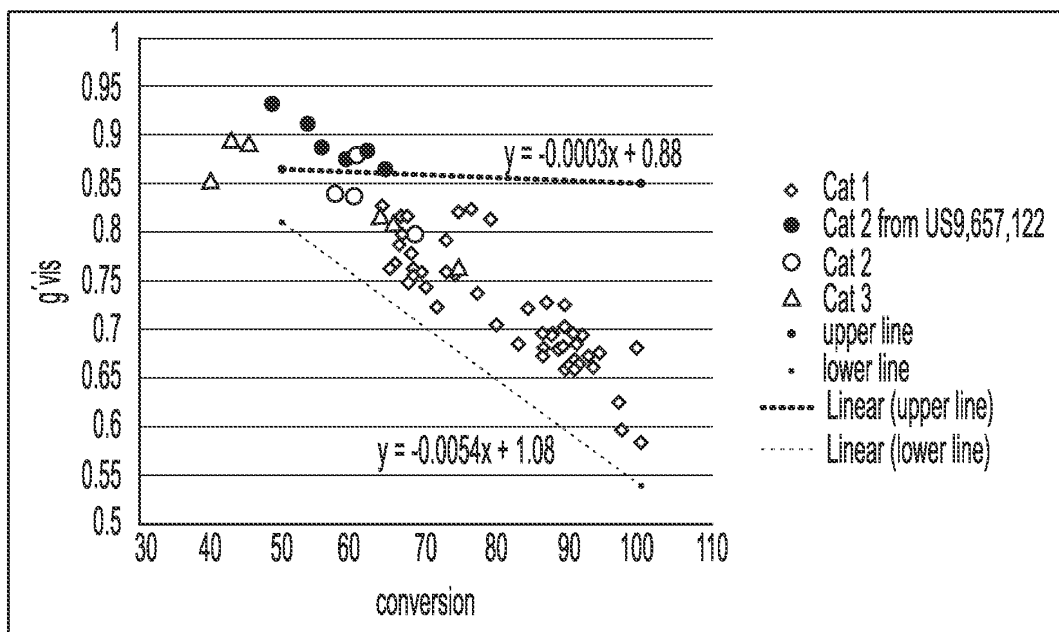
FIG. 4 Plot of total monomer conversion in the reactor vs. g' vis of the polymer produced

FIG. 5 Plot of ethylene (mol%) vs. the average methylene sequence lengths for sequences of six and greater as measured by ^{13}C NMR

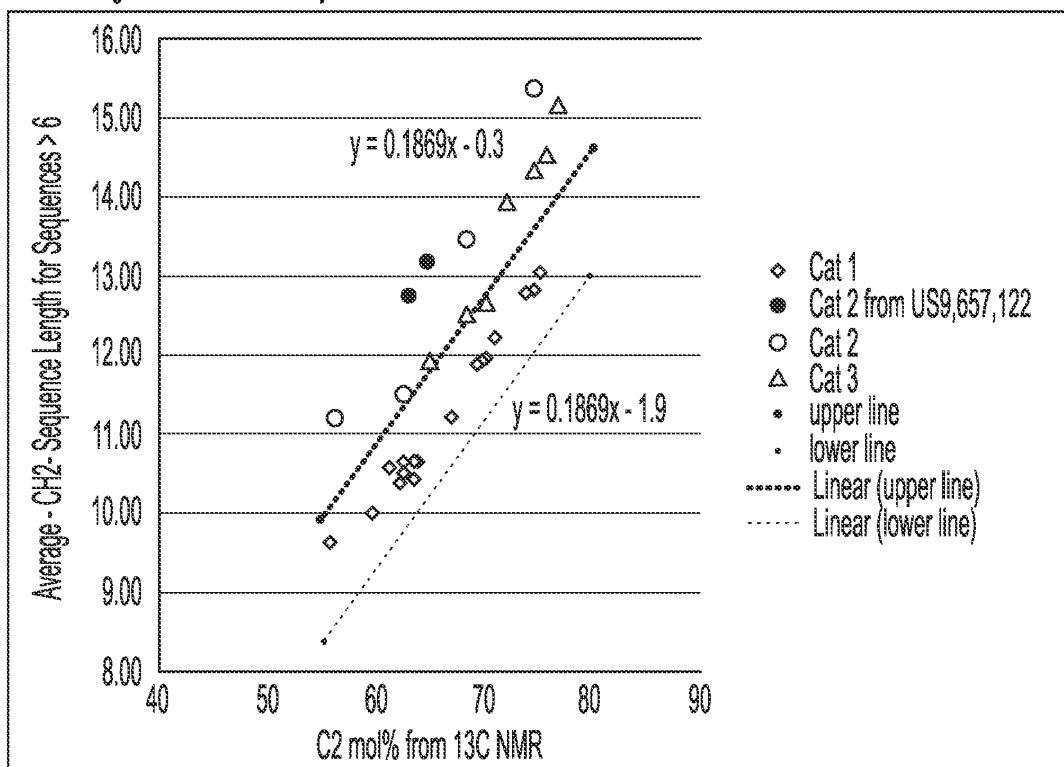


FIG. 6 Plot of ethylene (mol%) vs. m6 which is the percentage of methylene sequences of sequence length of six and greater as measured by ^{13}C NMR

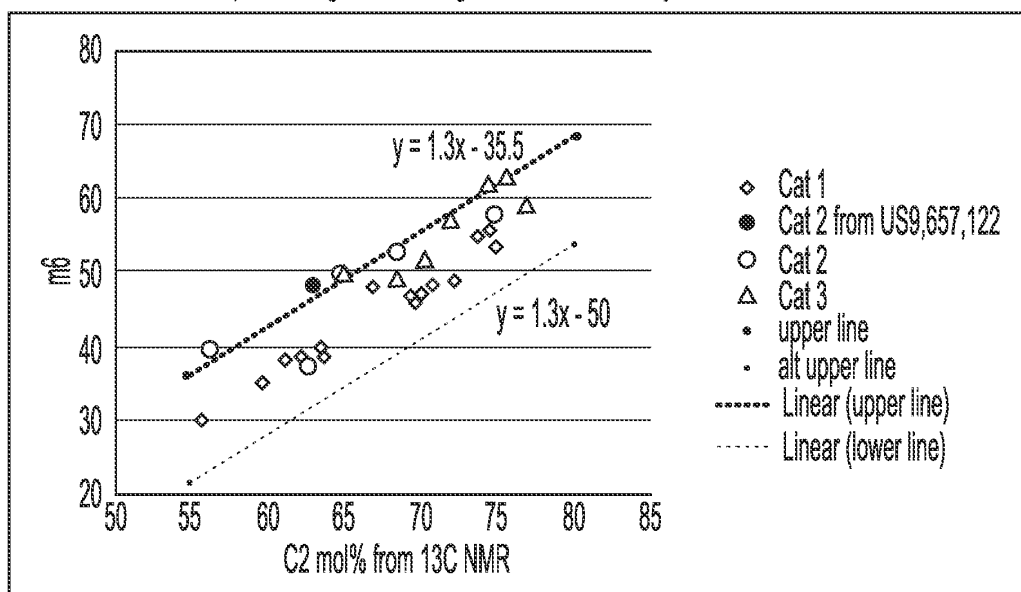


FIG. 7 Plot of ethylene (mol%) vs. r_1r_2 as measured by ^{13}C NMR

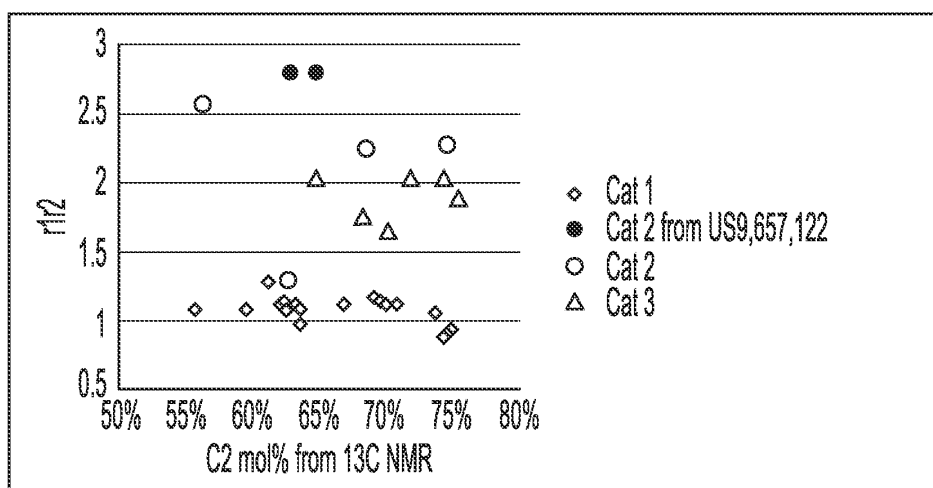


FIG. 8 Plot of ethylene (wt%) from FTIR vs. the Heat of Fusion (J/g) of the melting peak as measured by DSC

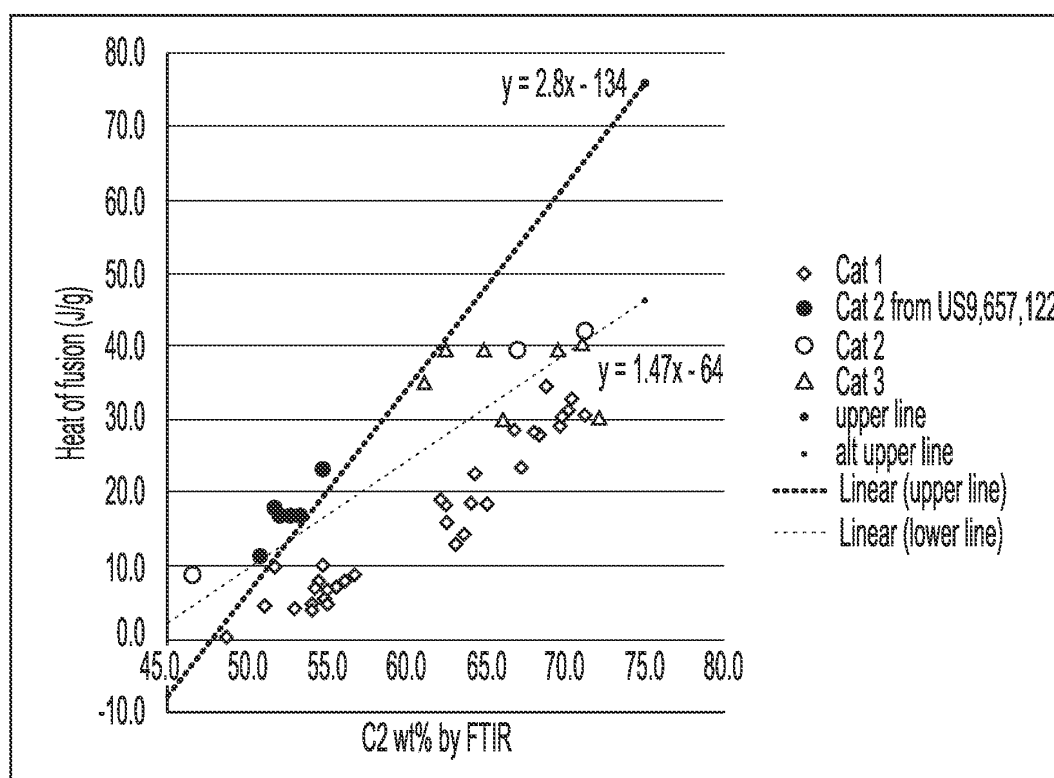


FIG. 9 Plot of SSI values vs. polymer MW for linear EP references and inventive long chain branched ethylene copolymer lubricant compositions

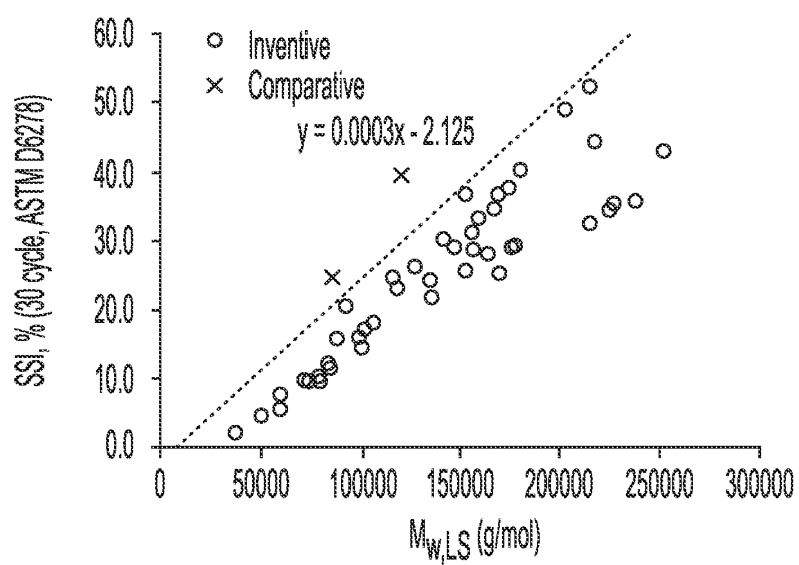


FIG. 10 Plot of polymer Mw (LS) vs. the shear thinning ratio where the shear thinning ratio is defined as the complex viscosity at a frequency of 0.1 rad/s divided by the complex viscosity at a frequency of 100 rad/s.

