

**OLIGOMERIZATION OF ALPHA OLEFINS USING METALLOCENE-SSA CATALYST
SYSTEMS AND USE OF THE RESULTANT POLYALPHAOLEFINS TO PREPARE
LUBRICANT BLENDS**

ABSTRACT

This disclosure provides for alpha olefin oligomers and polyalphaolefins (or PAOs) and methods of making the alpha olefin oligomers and PAOs. This disclosure encompasses metallocene- based alpha olefin oligomerization catalyst systems, including those that include at least one metallocene and an activator comprising a solid oxide chemically-treated with an electron withdrawing anion. The alpha olefin oligomers and PAOs prepared with these catalyst systems can have a high viscosity index combined with a low pour point, making them particularly useful in lubricant compositions and as viscosity modifiers.

Fig 1.