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(71) Applicant: **GEVO, INC.** [US/US]; 345 Inverness Drive South, Building C., Suite 310, Englewood, Colorado 80112 (US).

(72) Inventors; and

(71) Applicants: **SMITH, Jonathan O.** [US/US]; c/o GEVO, INC., 345 Inverness Drive South, Building C., Suite 310, Englewood, Colorado 80112 (US). **SJODIN, Madeline** [US/US]; c/o GEVO, INC., 345 Inverness Drive South, Building C., Suite 310, Englewood, Colorado 80112 (US). **VAILLANCOURT, Austin** [US/US]; c/o GEVO, INC., 345 Inverness Drive South, Building C., Suite 310, Englewood, Colorado 80112 (US). **STARKEY, Paul** [US/US]; c/o GEVO, INC., 345 Inverness Drive South, Building C., Suite 310, Englewood, Colorado 80112 (US). **DONEN, Steve** [US/US]; c/o GEVO, INC., 345 Inverness Drive South, Building C., Suite 310, Englewood, Colorado 80112 (US). **SHEBOWICH, Michelle** [US/US]; c/o GEVO, Inc., 345 Inverness Drive South, Building C., Suite 310, Englewood, Colorado 80112 (US).

(74) Agent: **BROW, William E.** et al.; Cooley LLP, 1299 Pennsylvania Avenue, N.W., Suite 700, Washington, District of Columbia 20004 (US).

(54) Title: CONVERSION OF MIXTURES OF C₂-C₈ OLEFINS TO JET FUEL AND/OR DIESEL FUEL IN HIGH YIELD FROM BIO-BASED ALCOHOLS

(57) Abstract: The present disclosure provides methods and materials for oligomerization of lower olefins (e.g., C₂-C₈) to transportation fuels including diesel and/or jet fuel. The oligomerization employs, in certain embodiments, tungstated zirconium catalysts. Surprisingly, the oligomerizations proceed smoothly in high yields and exhibit little to no sensitivity to the presence of significant amounts of oxygenates (e.g., water, lower alcohols such as C₂-C₈ alcohols) in the feed stream. Accordingly, the present disclosure is uniquely suited to the production of fuels derived from biobased alcohols, wherein olefins produced from such bio-based alcohols typically contain high levels of oxygenates.



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