CLAIMS

1. Process for preparing a hydrocarbon fluid, comprising an oligomerization step of an initial hydrocarbon composition comprising at least 2 %wt. of 3-methyl-but-1-ene, at least 5 %wt. of 2-methyl-but-2-ene and at least 5 %wt. of 2-methyl-but-1-ene relative to the total weight of the initial hydrocarbon composition.

2. The process according to the preceding claim, wherein the initial hydrocarbon composition is derived from biomass.

3. The process according to any of the preceding claims, wherein the initial hydrocarbon composition is obtained via dehydration of alcohol(s), preferably via dehydration of fusel oil.

4. The process according to any of the preceding claims, wherein the initial hydrocarbon composition comprises at least 20 %wt., preferably at least 30 %wt., more preferably at least 40 %wt., further preferably at least 50 %wt., still further preferably at least 60 %wt. of branched olefins having 5 carbon atoms selected from among 3-methyl-but-1-ene, 2-methyl-but-2-ene and 2-methyl-but-1-ene, relative to the total weight of the initial composition.

5. The process according to any of the preceding claims, wherein the initial hydrocarbon composition comprises at least 20 %wt., preferably at least 30 %wt., more preferably at least 40 %wt., further preferably at least 50 %wt., still further preferably at least 60 %wt. of 2-methyl-but-2-ene, relative to the total weight of the composition.

6. The process according to the preceding claim, wherein the initial hydrocarbon composition comprises 3-methyl-but-1-ene in a weight proportion such that the 3-methyl-but-1-ene represents the olefin having 5 carbon atoms present in majority amount in the initial hydrocarbon composition.

7. The process according to any of the preceding claims, wherein the oligomerization step is conducted in the presence of a catalyst selected from among alumina and aluminosilicates.

8. The process according to claim 7, wherein the catalyst is an aluminosilicate and the SiO_2/Al_2O_3 molar ratio of the catalyst ranges from 10 to 80, preferably from 15 to 50.

9. The process according to claim 7 or 8, wherein the catalyst is a mesoporous aluminosilicate having a BET specific surface area greater than or equal to 50 m^2/g, preferably ranging from 150 to 1200 m^2/g, preferably ranging from 250 to 550 m^2/g.

10. The process according to claim 7, wherein the catalyst is an amorphous Si Al catalyst (ASA) with 5 to 95 %wt. of silica (SiO_2), a BET specific surface area ranging from 100 to 550 m^2/g and accessible pore size ranging from 2 to 14 nm.

11. The process according to any of the preceding claims, implemented at a temperature ranging from 80 to 220 °C, preferably from 90 to 210 °C, more preferably from 100 to 200 °C.

12. The process according to any of the preceding claims, implemented at a pressure ranging from 2 to 50 bars, preferably from 5 to 40 bars, more preferably from 10 to 30 bars.

13. The process according to any of the preceding claims, further comprising at least one treatment step, preferably a hydrogenation step and/or fractionation step.

14. The process according to any of the preceding claims, comprising a step to recycle an effluent comprising non-reacted C5 olefins.

15. Hydrocarbon fluid capable of being obtained with the process according to any of claims 1 to 14, the fluid comprising C10 dimers, C15 trimers, C6-C9 molecules and C11-C14 molecules.

16. Use of the hydrocarbon fluid according to the preceding claim, as crude or hydrogenated and/or fractionated solvent cut for the formulation of inks, paints, varnishes, cleaning products, lubricants for metal working, dielectric fluids, drilling fluids, cosmetic products.