CLAIMS:

1. A method for preparing methyl methacrylate from methacrolein and methanol; said method comprising contacting a mixture comprising methacrolein, methanol and oxygen with a heterogeneous catalyst comprising a support and a noble metal, wherein said catalyst has an average diameter of from 400 microns to 10 mm and at least 90 wt% of the noble metal is in the outer 50% of catalyst volume, and at least 90 wt.% of the noble metal is within a distance from the surface that is no more than 15% of the catalyst diameter,

wherein the catalyst is produced by precipitating the noble metal from an aqueous solution of noble metal salt in the presence of the support, and

wherein a C_2-C_{18} thiol comprising at least one hydroxyl or carboxylic acid substituent is present in the solution.

2. The method of claim 1 in which the catalyst is contained in a catalyst bed.

3. The method of claim 2 in which the catalyst bed is at a temperature from 40 to 120 °C.

4. The method of claim 3 in which pH in the catalyst bed is from 4 to 10.

5. The method of claim 4 in which at least 90 wt% of the noble metal is in the outer 40% of catalyst volume.

6. The method of claim 4 in which at least 95 wt.% of the noble metal is within a distance from the surface that is no more than 15% of the catalyst diameter.

7. The method of claim 5 in which the noble metal is selected from the group consisting of gold and palladium.

8. The method of claim 7 in which the support is selected from the group consisting of γ-, δ-, or θ-alumina, silica, magnesia, titania, vanadia, ceria, lanthanum oxide and a combination thereof.

9. The method of claim 8 in which methanol and methacrolein are fed to a reactor containing the catalyst bed in a molar ratio from 1:1 to 10:1, respectively.

10. The method of claim 9 in which at least 95 wt% of the noble metal is in the outer 30% of catalyst volume.

11. The method of claim 9 in which at least 90 wt.% of the noble metal is within a distance from the surface that is no more than 10% of the catalyst diameter.