CLAIMS:

1. A method for preparing a heterogeneous catalyst for the preparation of methyl methacrylate from methacrolein and methanol by oxidative esterification; said method comprising steps of: (a) combining (i) a support, (ii) a solution of a noble metal compound and (iii) a C_2-C_{18} thiol comprising at least one hydroxyl or carboxylic acid substituent; to form a wet particle and (b) removing water from the wet particle by drying followed by calcination to produce the catalyst, wherein at least 90 wt% of the noble metal is in the outer 40% of catalyst volume.

2. The method of claim 1 in which the C_2-C_{18} thiol comprising at least one hydroxyl or carboxylic acid substituent has from one to three substituents selected from the group consisting of carboxylic acids and hydroxyls.

3. The method of claim 2 in which the noble metal is gold.

4. The method of claim 3 in which the support is selected from the group consisting of γ-, δ-, or θ-alumina, silica, magnesia, titania, vanadia, lanthanum oxide, ceria and combinations thereof.

5. The method of claim 4 in which the support has an aspect ratio no more than 3:1.

6. The method of claim 5 in which the C_2-C_{18} thiol comprising at least one hydroxyl or carboxylic acid substituent has from two to eight carbon atoms.

7. The method of claim 6 in which the amount of noble metal as a percentage of noble metal and the support is from 0.2 to 5 wt%.

8. The method of claim 7 in which the wet particle is dried at a temperature from 20-150°C under vacuum to form a dried particle and the dried particle is calcined at a temperature from 250-550°C.

9. The method of claim 8 in which average diameter of the catalyst particle is from 60 microns to 10 mm.

10. The method of claim 9 in which the C_2-C_{18} thiol comprising at least one hydroxyl or carboxylic acid substituent is selected from the group consisting of thiomalic acid, 3-mercaptopropionic acid, thioglycolic acid, 2-mercaptoethanol, 1-thioglycerol, their conjugate bases and combinations thereof.

11. The method of claim 1 in which 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.