**CLAIMS**

1. A process of producing methyl methacrylate or derivatives thereof comprising the steps of;
(i) converting 2-butanone to methyl propionate using a Baeyer-Villiger monooxygenase, and
(ii) treating the methyl propionate produced to obtain methyl methacrylate or derivatives thereof, wherein the Baeyer-Villiger monooxygenase is a type I Baeyer-Villiger monooxygenase selected from one of the following enzyme groups: a cyclohexanone monooxygenase (CHMO) EC number 1.14.13.22 (GenBank: BAA86293.1); a 4-hydroxyacetophenone monooxygenase (HAPMO) EC number 1.14.13.84 (GenBank: AAK54073.1); a cyclopentadecanone monooxygenase (CPDMO) (GenBank:BAE93346.1).

2. A process according to claim 1, wherein the methyl propionate is treated to produce methyl methacrylate or methacrylic acid by reaction with formaldehyde or a suitable source thereof in the presence of a suitable catalyst.

3. ~~A process according to any one of claims 1 or 2, wherein the Baeyer-Villiger monooxygenase is a wild type enzyme and wherein bacterial sources of the wild type Baeyer-Villiger Monooxygenase enzyme are bacteria from the following bacterial genera; *Acinetobacter, Rhodococcus, Arthrobacter, Brachymonas, Nocardia, Exophiala, Brevibacterium, Gordonia, Novosphingobium, Streptomyces, Thermobifida, Xanthobacter, Mycobacterium, Comamonas, Thermobifida* or *Pseudomonas*.~~

4. ~~A process according to any preceding claim, wherein the Baeyer-Villiger monooxygenase is a wild type enzyme deriving from the bacterial species *Acinetobacter calcoaceticus* NCIMB 9871 or *Rhodococcus jostii* RHA1 or *Rhodococcus* sp. HI-31 or *Xanthobacter flavus or Brachymonas petroleovorans*.~~

5. ~~A process according to any preceding claim, wherein the Baeyer-Villiger monooxygenase is a type I, type II or type O Baeyer-Villiger monooxygenase.~~

6. ~~A process according to any preceding claim, wherein the Baeyer-Villiger monooxygenase is a type I Baeyer-Villiger monooxygenase selected from one of the following enzyme groups: a cyclohexanone monooxygenases (CHMO) EC number 1.14.13.22 (GenBank: BAA86293.1); a phenylacetone monooxygenases (PAMO) EC number 1.14.13.92 (Swiss-Prot: Q47PU3); a 4-hydroxyacetophenone monooxygenase (HAPMO) EC number 1.14.13.84 (GenBank: AAK54073.1); an acetone monooxygenases (ACMO) (GenBank: BAF43791.1); a methyl ketone monooxygenases (MEKA) (GenBank: ABI15711.1); a cyclopentadecanone monooxygenases (CPDMO) (GenBank: BAE93346.1); a~~

~~cyclopentanone monooxygenases (CPMO) (GenBank: BAC22652.1); a steroid monooxygenases (STMO) (GenBank: BAA24454.1).~~

~~7~~3. A process according to any preceding claim, wherein the Baeyer-Villiger monooxygenase is a cyclohexanone monoxygenase, a 4-hydroxyacetophenone monooxygenase, or a cyclopentadecanone monooxygenase ~~or an acetone monoxygenase~~, selected from one of the following enzymes: cyclohexanone monooxygenase from *Acinetobacter calcoaceticus* NCIMB 9871, cyclohexanone monooxygenases from *Xanthobacter flavus* (GenBank: CAD10801.1), cyclohexanone monooxygenases from *Rhodococcus* sp. HI-31 (GenBank: BAH56677.1), cyclohexanone monoxygenase from Brachymonas petroleovorans (GenBank: AAR99068.1), 4-hydroxyacetophenone monooxygenase (Q93TJ5.1)~~,~~ or cyclopentadecanone monooxygenase (GenBank: BAE93346.1)~~, or acetone monooxygenase from *Gordonia sp.* TY-5 (Genbank: BAF43791.1)~~.

~~8~~4. A process according to any preceding claim, wherein the Baeyer-Villiger monooxygenase is a cyclohexanone monoxygenase,~~or an acetone monoxygenase~~, selected from: cyclohexanone monooxygenase from *Acinetobacter calcoaceticus* NCIMB 9871, cyclohexanone monooxygenases from *Xanthobacter flavus* (GenBank: CAD10801.1), cyclohexanone monooxygenases from *Rhodococcus* sp. HI-31 (GenBank: BAH56677.1), or cyclohexanone monoxygenase from Brachymonas petroleovorans (GenBank: AAR99068.1)~~, or acetone monooxygenase from *Gordonia sp.* TY-5 (Genbank: BAF43791.1)~~.

~~9~~5. A process according to any one of claims 1 to ~~4~~8, wherein the Baeyer-Villiger monooxygenase is selected from a cyclohexanone monoxygenase, a 4-hydroxyacetophenone monooxygenase, or a cyclopentadecanone monooxygenase.

~~10~~6. A process according to any preceding claim wherein the Baeyer-Villiger monooxygenase is a cyclohexanone monooxygenase.

~~11~~7. A process according any preceding claim, wherein the Baeyer-Villiger monooxygenase is cyclohexanone monooxygenase deriving from *Acinetobacter calcoaceticus* NCIMB 9871, *Xanthobacter flavus* (GenBank: CAD10801.1) or *Rhodococcus* sp. HI-31 (GenBank: BAH56677.1).

~~12~~8. A process according to any of claims 1, 2, 3 and 5 ~~to 7 or 9~~ wherein the Baeyer-Villiger monooxygenase is a 4-hydroxyacetophenone monooxygenase deriving from *Pseudomonas flourescans.*

~~13~~9. A process according to any of claims 1 to 3 and ~~5 7 or 9~~ wherein the Baeyer-Villiger monooxygenase is a cyclopentadecanone monooxygenase deriving from *Pseudomonas sp. HI-70.*

~~14~~10. A process according to any preceding claim, wherein at least one co-solvent is included in the reaction mixture of the above process, wherein the co-solvent is selected from one of the following: methanol, 2-butanol, tert-butanol, dioxane, acetone or acetonitrile.

~~15~~11. A process according to claim 10~~14~~, wherein the co-solvent used is methanol.

~~16~~12. A process according to claims 10 or 11~~14 or 15~~, wherein the concentration of co-solvent/substrate is at 1000:1 or greater mol:mol of Baeyer-Villiger Monoxygenase.

~~17~~13. A process according to any preceding claim, wherein the ratio of methyl propionate: ethyl acetate production by the Baeyer-Villiger Monoxygenase is at least 1:5.

~~18~~14. A process according to any preceding claim, wherein the Baeyer Villiger monoxygenase converts 2-butanone to methyl propionate at an absolute level of at least 2% selectivity.

~~19~~15. A process according to any preceding claim, wherein the Baeyer Villiger Monooxygenase converts 2-butanone to methyl propionate at a relative level of at least 20%.

~~20~~16. A method of preparing polymers or copolymers of methyl methacrylate or derivatives thereof comprising the steps of:
(i) preparation of methyl methacrylate or derivatives thereof in accordance with the process of any one of claims 1 to ~~19~~15;
(ii) polymerisation of the methyl methacrylate prepared in (i), optionally with one or more comonomers, to produce polymers or copolymers thereof.

~~21~~17. A method according to claim 16~~20~~, wherein the comonomers are monoethylenically unsaturated carboxylic acids and dicarboxylic acids and their derivatives, including esters, amides and anhydrides.

~~22~~18. A method according to claims 16 or 17~~20 or 21~~, wherein the comonomers are selected from: acrylic acid, methyl acrylate, ethyl acrylate, propyl acrylate, n-butyl acrylate, iso-butyl acrylate, t-butyl acrylate, 2-ethylhexyl acrylate, hydroxyethyl acrylate, iso-bornyl acrylate, methacrylic acid, methyl methacrylate, ethyl methacrylate, propyl methacrylate, n-butyl methacrylate, iso-butyl methacrylate, t-butyl methacrylate, 2-ethylhexyl methacrylate, hydroxyethyl methacrylate, lauryl methacrylate, glycidyl methacrylate, hydroxypropyl methacrylate, iso-bornyl methacrylate, dimethylaminoethyl methacrylate, tripropyleneglycol

diacrylate, styrene, α-methyl styrene, vinyl acetate, isocyanates including toluene diisocyanate and p,p'-methylene diphenyl diisocyanate, acrylonitrile, butadiene, butadiene and styrene (MBS) and ABS subject to any of the above comonomers not being the momomer selected from methacrylic acid or a methacrylic acid ester in (i) or (ii) above in any given copolymerisation of the said acid monomer in (i) or a said ester monomer in (ii) with one or more of the comonomers.