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(21) International Application Number: PCT/US99/28247 (22) International Filing Date: 30 November 1999 (30.11.99) (30) Priority Data: 09/215,409 18 December 1998 (18.12.98) US (71) Applicants: E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US). DSM N.V. [NL/NL]; Het Overloon 1, NL-6411 TE Heerlen, Galeen (NL). (72) Inventor: BURKE, Patrick, Michael; 4613 Talley Hill Lane, Wilmington, DE 19803 (US). (74) Agent: STEVENSON, Robert, B.; E.I. du Pont de Nemours and Company, Legal Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US).		(81) Designated States: CA, CN, ID, JP, KR, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>
(54) Title: PROCESS FOR THE PREPARATION OF BETA-GAMMA UNSATURATED ESTERS (1) (57) Abstract A process for the carbonylation of allylic butenyl ether (e.g., methyl crotyl ether, 3-methoxybutene-1 and mixtures thereof) or mixture of butadiene and alcohol (e.g., methanol) and production of beta-gamma unsaturated carboxylic acid esters (e.g., methyl-3-pentenoate) utilizing a rhodium-containing catalyst (e.g., dicarbonylacetylacetonate rhodium(I) or the like) promoted with an iodide-containing compound (e.g., HI, AlI₃, SnI₄, TiI₄, CrI₃, and CoI₂ or the like). Such a process is particularly useful in the production of difunctional monomers and intermediates in the synthesis of adipic acid. The representative reaction showing (a) butadiene in the presence of methanol under catalytic reaction conditions producing the 3-methoxybutene-1 intermediate (a positional isomer of methyl crotyl ether) which is then combined with carbon monoxide to produce methyl pentenoate is illustrative of the overall carbonylation.		