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Robert Ian [GB/GB]; 27 Querneby Road, Nottingham
Nottinghamshire NG3 5JA (GB).

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(71) Applicant (*for all designated States except US*): **SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V.** [NL/NL]; Carel van Bylandtlaan 30, NL-2596 HR The Hague (NL).

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(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **DRENT, Eit** [NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL). **ERNST, René** [NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL). **JAGER, Willem Wabe** [NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL). **PUGH,**

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(54) Title: PROCESS FOR THE CARBONYLATION OF ETHYLENICALLY OR ACETYLENICALLY UNSATURATED COMPOUNDS

(57) Abstract: A process for the carbonylation of unsaturated compounds by contacting the unsaturated compound with carbon monoxide in the presence of a catalyst system comprising: (a) a source of palladium and/or platinum; and (e) an unsymmetrical bidentate diphosphine ligand of formula (I), $R^1R^2 > P^1 - R^3 - P^2 < R^4R^5$ (I) wherein P^1 and P^2 represent phosphorus atoms; R^3 represents a divalent organic bridging group; and R^1 , R^2 , R^4 and R^5 each individually, or R^1 and R^2 jointly, and/or R^4 and R^5 jointly represent organic groups that are covalently linked to the phosphorus; and wherein R^1 , R^2 , R^4 and R^5 are chosen in such way, that the phosphino group $R^1R^2 > P^1$ differs from the phosphino group $P^2 < R^4R^5$.



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