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(21) International Application Number: PCT/US97/16540 (22) International Filing Date: 18 September 1997 (18.09.97) (30) Priority Data: 60/031,070 18 November 1996 (18.11.96) US (71) Applicant: E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, DE 19898 (US). (72) Inventors: ^① BROOKHART, Maurice, S.; 944 Old Orchard Road, Chapel Hill, NC 27514 (US) ^② HAUPTMAN, Elisabeth, Muriel; 2106-B Haven Road, Wilmington, DE 19809 (US). (74) Agent: SIEGELL, Barbara, C.; E.I. du Pont de Nemours and Company, Legal Patent Records Center, 1007 Market Street, Wilmington, DE 19898 (US).		(81) Designated States: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, <u>SG</u> , SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: CROSS-DIMERIZATION OF OLEFINS		
(57) Abstract Disclosed is a process for the production of chemical intermediates by the cross dimerization of two compounds containing carbon-carbon double bonds, wherein said process is catalyzed by a nickel II catalyst which is a complex with η^3 carbon-based allyl or substituted allyl, trisubstituted phosphine, and a weakly coordinating ligand. This catalyst may be used to selectively cross-dimerizes ethylene and methyl acrylate to give methyl 4-pentenoate, a nylon 6,6 intermediate.		