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WO 2005/016510 A1

(54) Title: MICROENCAPSULATED CATALYST-LIGAND SYSTEM, METHODS OF PREPARATION AND METHODS OF USE THEREOF

(57) Abstract: A microencapsulated catalyst-ligand system is prepared by dissolving or dispersing a catalyst and/or a ligand in a first phase (for example an organic phase), dispersing the first phase in a second, continuous phase (for example an aqueous phase) to form an emulsion, reacting one or more microcapsule wall-forming materials at the interface between the dispersed first phase and the continuous second phase to form a microcapsule polymer shell encapsulating the dispersed first phase core and when the first phase contains only a catalyst or a ligand, treating the microcapsules with the remaining ligand or catalyst component of the catalyst-ligand system. The catalyst is preferably a transition metal catalyst and the ligand is preferably an organic ligand. The encapsulated catalyst-ligand system may be used for conventional catalysed reactions. The encapsulated catalyst-ligand system may be recovered from the reaction medium and re-cycled.