

From Monophasic Dimersol process To Biphasic Difasol process

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It has repeatedly been shown that biphasic liquid-liquid catalysis is highly attractive to solve the problem of homogeneous catalyst recovery. It combines simple recovery of the active species with selective reaction monitored by soluble metal complex¹.

IFP applied this concept, using an ionic liquid as catalyst's solvent, to upgrade its existing Dimersol-X process².

Butenes dimerization can now be operated through Difasol liquid-liquid biphasic reaction³ and we'd like to present its process scheme, its increased yield, selectivity and cost savings compared to the original Dimersol monophasic reaction. These improvements are available either to grassroots units or to upgrade existing Dimersol-X units.

¹ Cornils, B.; Herrmann, W. A. *Aqueous-Phase Organometallic Catalysis*; Weinheim ed.; Wiley: N-Y (1998); R. Sheldon, *Chem. Commun.*, **2001**, 2399 ; Olivier-Bourbigou, H.; Magna, L. *J. Mol. Catal A*, **2002**, 3484, 1.

² 35 unit licensed

³ F. Favre, A. Forestiere, F. Hugues, H. Olivier-Bourbigou, J-A. Chodorge, *Proceedings of the DGMK conference*, **2002-4**, 107 ; F. Favre, A. Forestiere 'Difasol process', to be published in *Multiphase Homogeneous Catalysis*, Ed. Cornils, B.; Herrmann,; VCH Wiley.