

I-27

TRANSITION METAL DERIVATIVES DERIVED FROM PERFLUOROALKYNES

D. W. A. Sharp*, K. W. Muir, Lj. Manojlovic-Muir

University of Glasgow, Glasgow G12 8QQ (U.K.)

F. Y. Petillon, J.-L. Le Quere, F. Le Floch-Perennou, J. E. Guerchais and M.-B. Gomes de Lima

University of Brest, Brest (France)

Further reactions of perfluoroalkynes with metallic and organometallic derivatives will be described. The new reactions will include those of $[(\eta^5\text{-C}_5\text{H}_5)(\text{OC})_3\text{M}(\mu\text{-SR})\text{M}'(\text{CO})_5]$ and $[(\eta^5\text{-C}_5\text{H}_5)\text{W}(\text{CO})_3\text{H}]$ with hexafluorobut-2-yne. The products include $[(\eta^5\text{-C}_5\text{H}_5)(\text{OC})(\text{CF}_3\text{C}_2\text{CF}_3)\text{-W}(\mu\text{-SMe})\text{W}(\text{CO})_5]$, $[(\eta^5\text{-C}_5\text{H}_5)(\text{OC})_2\text{WC}(\text{O})\text{C}(\text{CF}_3)=\text{C}(\text{CF}_3)\text{H}]$ and $[(\eta^5\text{-C}_5\text{H}_5)(\text{OC})([\text{MeO}]_2\text{P})\text{WC}(\text{O})\text{C}(\text{CF}_3)=\text{C}(\text{CF}_3)\text{H}]$ for which crystal structures will be described. The position of attack of alkynes upon bimetallic species will be rationalised. Spectroscopic and structural parameters of the complexes will be correlated with the presence of the perfluoroalkyl groups. The work has been supported by SERC, NATO, and CNPq-Brazil.