E - 06

STEREO-SELECTIVE FORMATION OF SOME TRICARBONYL (n^4 CYCLOHEXADIENE) IRON COMPLEXES FROM THEIR ORGANIC PRECURSORS

B. M. Ratnayake Bandara
(Department of Chemistry, University of Peradeniya)

Arthur J. Birch *and* **Brian Chauncy**
(Dyson Perrins Laboratory, University of Oxford)

Regio-and stereo-selective formations of variously substituted tricarbonyl-cyclohexadiene-iron complexes need to be known if they are to be employed as synthetic intermediates in organic synthesis. The present study is an examination of the influence of the phenyl and carboxyl substituents on the steric course in the complexation of cyclohexadienes with pentacarboxyl-iron. With crystallographic evidence for steric structures of the products, we propose an initial direction of the reactive iron species by the substituent, in the order methoxycarbonyl > > phenyl > methyl.