

Quantitative characterization of the global electrophilicity power of common diene/dienophile pairs in Diels-Alder reactions

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The global electrophilicity power, ω , of a series of dienes and dienophiles commonly used in Diels-Alder reactions may be conveniently classified within a unique relative scale. Useful information about the polarity of transition state structures expected for a given reaction may be obtained from the difference in the global electrophilicity power, $\Delta\omega$, of the diene/dienophile interacting pair. Thus the polarity of the process can be related with non-polar ($\Delta\omega$ small, pericyclic processes) and polar ($\Delta\omega$ big, ionic processes) mechanisms. © 2002 Elsevier Science Ltd. All rights reserved.