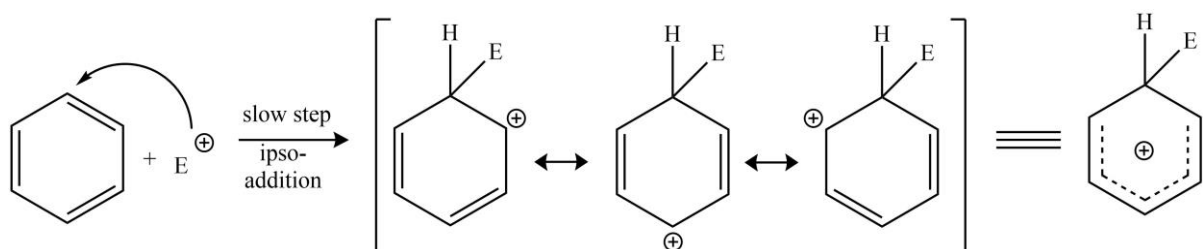


❖ Energy Profile Diagrams

The general mechanism for the aromatic electrophilic substitution involves two main steps which must be discussed before we give an energy profile diagram of the same. The electrophile attacks the aromatic ring to form resonance stabilized carbocations, followed by the detachment of leaving group.



A typical energy level profile of various intermediates and transition states in the course of electrophilic substitution reactions in aromatic compounds is shown below.

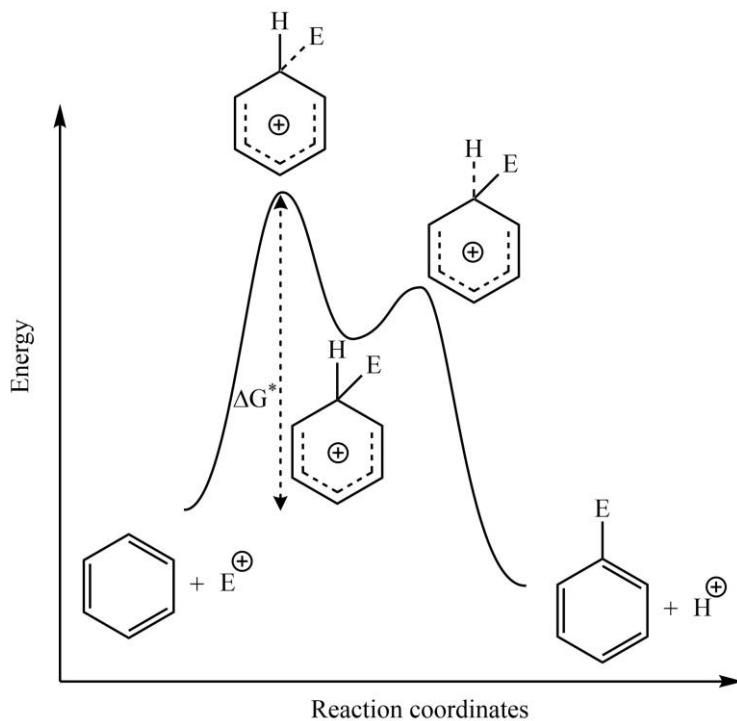


Figure 1. Energy profile diagram for a typical aromatic electrophilic substitution.

Finally, it is also worthy to note that the rate of electrophilic substitution in already substituted aromatic compounds depends upon the height of the potential barrier which will be different for different types of attack i.e., *o*-, *m*- or *p*-attacks.

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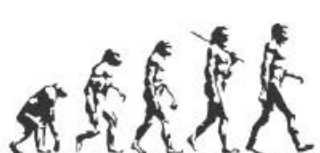
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A TEXTBOOK OF ORGANIC CHEMISTRY

Volume I

MANDEEP DALAL



First Edition

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Mandeep Dalal

(M.Sc, Ph.D, CSIR UGC – NET JRF, IIT-GATE)

Founder & Educator, Dalal Institute

E-Mail: dr.mandeep.dalal@gmail.com

www.mandeepdalal.com

Mandeep Dalal is an Indian research scholar who is primarily working in the field of Science and Philosophy. He received his Ph.D in Chemistry from Maharshi Dayanand University, Rohtak, in 2018. He is also the Founder of "Dalal Institute" (India's best coaching centre for academic and competitive chemistry exams), the organization that is committed to revolutionize the field of school-level and higher education in Chemistry across the globe. He has published more than 40 research papers in various international scientific journals, including mostly from Elsevier (USA), IOP (UK), and Springer (Netherlands).

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