

# Long-Range DNA Charge Transport

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## **Abstract:**

The stack of base pairs within double helical DNA has been shown to mediate charge transport reactions. Charge transport through DNA can result in chemistry at a distance, yielding oxidative DNA damage at a site remote from the bound oxidant. Since DNA charge transport chemistry depends on coupling within the stacked base pair array, this chemistry is remarkably sensitive to sequence-dependent DNA structure and dynamics. Here, we discuss different features of DNA charge transport chemistry, including applications as well as possible biological consequences and opportunities.

Full Text (Subscription May Be Required):

<http://pubs.acs.org/cgi-bin/article.cgi/jocean/2003/68/i17/pdf/jo030095y.pdf>