VIP: Distance-independent DNA Charge Transport across an Adenine Tract

Katherine E. Augustyn, Joseph C. Genereux, Jacqueline K. Barton*

DNA-mediated charge transport across adenine tracts was monitored using a probe inside the bridge N_6 -cyclopropyladenine. This trap, incorporated serially across the bridge, could be oxidized by a distal rhodium photooxidant without a significant decrease in the yield over a distance of five nanometers. These results are consistent with complete radical delocalization across the DNA bridge.

Received April 07, 2007, published online July 02, 2007, DOI: 10.1002/anie.200701522.