Abstract Submitted
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Enhancement of the Electrical Properties of DNA Molecular Wires NOLAN KING, University of Texas at Dallas — Due to its self-assembling properties, DNA has been identified as a promising material for construction of nanoscale electronic devices. In this study, we design and fabricate well-matched and perelyenediimide containing DNA molecular wires, and their electrical properties are characterized. We find PTCDI-containing wires exhibit an approximately 6-fold enhancement in the observed current levels. Additionally, a multiplexed measurement solution is prototyped in order to facilitate the testing of multiple devices at once and reduce the time burden associated with device testing.

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