

# Embedded Passivated-electrode Insulator-based Dielectrophoresis ( $E\pi$ DEP)

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Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in  
partial fulfillment of the requirements for the degree of

Master of Science  
In  
Electrical Engineering

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Microfluidic, Microfabrication, Insulator-based dielectrophoresis (iDEP)

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Name: Tyler J Shake

Description of item under review for fair use: Voldman, Joel. "Electrical Forces for Microscale Cell Manipulation." Annual Review of Biomedical Engineering. 2006.

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Description of item under review for fair use: Pethig, Ronald. "Review Article – Dielectrophoresis: Status of the theory, technology, and applications." *Biomicrofluidics*. 2010.

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Name: Tyler J Shake

Description of item under review for fair use: Castellarnau, M, A. Errachid, C. Madrid, A. Juarez, J. Samitier. "Dielectrophoresis as a Tool to Characterize and Differentiate Isogenic Mutants of Escherichia coli" Biophysical Journal. 2006.

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