Abstract Submitted
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Development of Bio-Compatible Films for Implantable Electronics G. PADRON-WELLS, BRANDON JARVIS, Dept. of Electrical Engineering, University of Texas at Dallas, ASHISH K. JINDAL, The University of Texas Southwestern Medical Center at Dallas, M.J. GOECKNER, Dept. of Electrical Engineering, University of Texas at Dallas — Polyethylene glycols thin films have shown promise as nonfouling passivation layers for implantable devices. Plasma Enhanced Chemical Vapor Deposition (PECVD) is a popular tool for altering the surface chemistry of such devices, particularly in the realm of flexible electronics, where uniformity of film thickness and the chemical composition of the deposited film are of critical importance. In the present work an extensive FTIR gas phase analysis of Di(ethylene glycol) vinyl ether (DEGVE) pulsed plasma discharges was performed. It was found that nonfouling effectiveness, observed in previous studies by Wu,[1] *et al.*, of PECVD DEGVE films can be directly attributed to the chemical properties of the reacting plasma. This data allowed for the construction of a dissociative model of the DEGVE.

[1]Yuliang J. Wu, Richard B. Timmons, James S. Jen, Frank E. Molock. Colloids and Surfaces B: Biointerfaces 18 (2000) 235 – 248

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