Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

On-chip growth of polymeric nanowires for electro-mechanical probing of live cells BRET FLANDERS, PREM THAPA, Kansas State University — This study characterizes the directed electrochemical nanowire assembly of amorphous polythiophene nanowires on micro-electrode arrays. In this approach, a long range component of an applied voltage signal defines a channel of maximum flux in the laboratory reference frame. Amorphous wires lack a natural growth axis. However, because polymerization is restricted to the channel-region, such materials may be grown with wire-like geometries, and the growth path of these wires may be controlled. The wire-laden electrode arrays are useful substrates for cell physiological studies. To this end, non-invasive methodology for inducing single Dictyostelium cells to approach and attach individual pseudopods to the tips of the polymeric wires will be presented.

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Date submitted: 30 Nov 2008 Electronic form version 1.4