

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Dynamic friction measurements on living HeLa cells MARC-ANTONI GOULET, MARIE-JOSÉE COLBERT, KARI DALNOKI-VERESS, Department of Physics & Astronomy and the Brockhouse Institute for Materials Research, McMaster University — The interaction of cells with various interfaces, and especially man-made surfaces, is an active field of research. In our experiment we use a micropipette to measure both the friction and normal force as a cell slides across a surface. A thin substrate, coated with Poly-L-Lysine is brought into contact with a HeLa cell. The adjustable substrate motion is used to study the response of the cell at various normal forces and speeds. Analysis of the micropipette provides dynamic measurements of both the friction and normal force. With our novel setup we are able to probe the attachment/detachment process of living cells.

Kari Dalnoki-Veress
Department of Physics & Astronomy and the Brockhouse Institute
for Materials Research, McMaster University

Date submitted: 03 Dec 2007

Electronic form version 1.4