

Abstract Submitted
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A novel approach to measurement of the adhesion strength of a single cell on a substrate MARIE-JOSEE COLBERT, KARI DALNOKI-VERESS, CECILE FRADIN, Department of Physics & Astronomy and the Brockhouse Institute for Material Research, McMaster University, Hamilton, Canada — The fundamental study of the adhesion of cells on solid surfaces is crucial to the characterization and development of materials suitable for use in biological environments (i.e. implants). We will present our work on the adhesion of a single vesicle on a substrate. A vesicle is held at the end of a micropipette mounted on a micromanipulator and put into contact with a surface. Adhesion is measured by pulling the vesicle from the substrate. Rather than using suction to infer the adhesion strength, we take advantage of the spring constant of an L-shaped micropipette to directly measure the adhesion force. The effect of surface roughness on the adhesion strength of vesicles will be discussed.

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