

Supporting Information

**Enzymatically Enhanced Collisions on Ultramicroelectrodes for Specific and Rapid
Detection of Individual Viruses**

Jeffrey E. Dick^{a,§}, Adam T. Hilterbrand^{b,§}, Lauren M. Strawsine,^a Jason W. Upton^b, and
Allen J. Bard^{a*}

^aCenter for Electrochemistry, Department of Chemistry, The University of Texas at Austin, Austin,
Texas 78712

^bDepartment of Molecular Biosciences, Institute for Cellular and Molecular Biology, University of
Texas at Austin, Austin, TX 78712

[§]Authors contributed equally to this work.

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Control Experiments

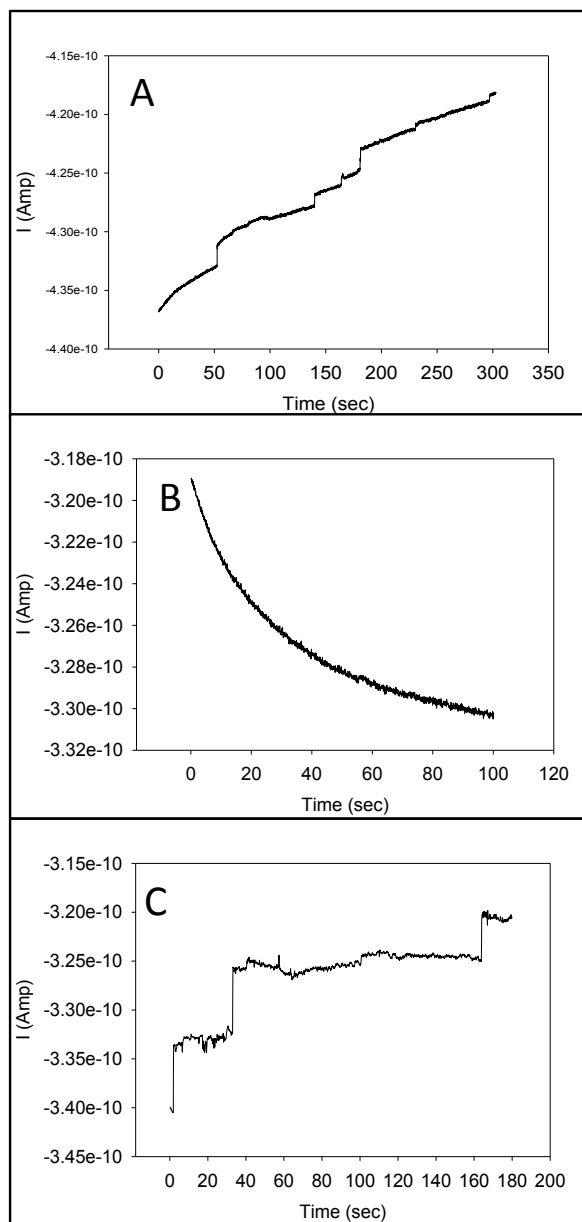


Figure S1. A.) Control amperometric i - t curve of MCMV collisions with the antibody/GOx conjugate in the absence of glucose. Anodic potentials are plotted positive of the origin, and anodic currents are plotted negative to the origin. B.) Control amperometric i - t curve of the antibody/GOx conjugate and glucose. C.) Control amperometric i - t curve of MCMV in the presence of excess GOx with no antibody conjugation.

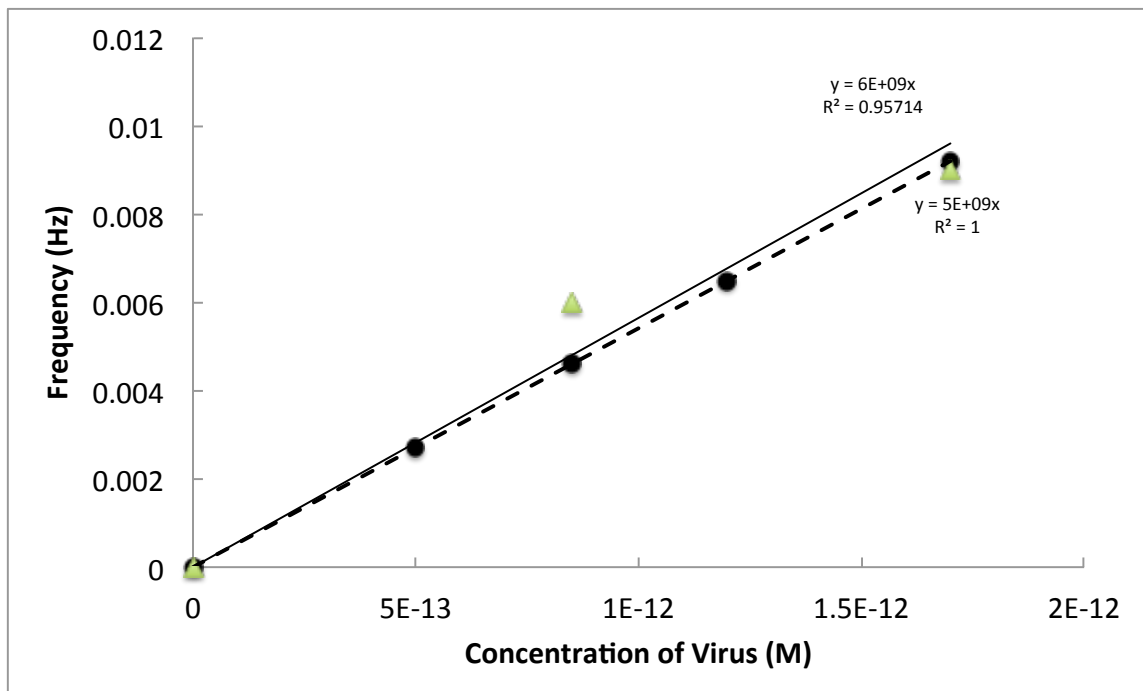


Figure S2. Frequency of anodic steps as a function of concentration of MCMV for the experimental results of virus spiked in urine (solid line) plotted with the calculated expectation (dashed line), which assumes mass transfer only by diffusion. These experiments were carried out in urine.

Table S1. Summary of control experiments and responses observed.

Table SI I: Summary of Control Experiments					
	Virus	Antibody	Glucose Oxidase	Glucose	Events Observed
Negative 1	MCMV	Yes	Yes	No	Blocking
Negative 2	None	Yes	Yes	Yes	Steadily Increasing Current
Negative 3	MCMV	No	Yes	Yes	Blocking
Positive	MCMV	Yes	Yes	Yes	Anodic Steps
Complex	MCMV and MHV68	Yes	Yes	Yes	Blocking and Anodic Steps