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Improved Noise in high impedance samples using differential voltage MICHAEL HOLTEN, M.S. CROSSER, Linfield College — We report initial efforts to develop a high-impedance, lock-in amplifier-based technique for investigating the surface density of states of semiconducting polymers. An inverting signal adder is used to combine the signal from a lock-in amplifier and a slowly ramping bias from a function generator. This combined signal is then sent to the sample through an insulating surface. Operational amplifiers are used to buffer the voltage signal across the sample despite the high impedance of the sample. Potential applications for this technique will be discussed.

> Michael Holten Linfield College

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