Abstract Submitted
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Measuring Spin Dependent Hot Electron Transport in Fe/Si(001) Schottky Diodes[1] ANDREW STOLLENWERK, University at Albany, MICHAEL KRAUSE, Thomson, JOHN GARRAMONE, EVAN SPADAFORA, VINCENT LABELLA, University at Albany — Devices that utilize the spin degree of freedom rely on transport of electron spin through materials and material interfaces. Further knowledge of spin-polarized electron transport can aid in the development of spintronic devices. To this end, we developed a novel technique; spin polarized ballistic electron emission microscopy (SP-BEEM). This technique has been utilized to study the spin dependent transport properties in Fe/Si(001) Schottky diodes. The energetic dependence of the spin dependent attenuation lengths was measured. Most interestingly, it was found that the interface band structure played a prominent role in this dependence.

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Andrew Stollenwerk
University at Albany

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