

Abstract Submitted  
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**Magneto-thermoelectric effects in the two-dimensional electron gas of a HgTe quantum well due to THz laser heating by cyclotron resonance absorption**<sup>1</sup> MEHDI PAKMEHR, University at Buffalo, the State University of New York, CHRISTOPH BRUENE, HARTMUT BUHMANN, LAURENS MOLENKAMP, University of Wuerzburg, BRUCE MCCOMBE, University at Buffalo, the State University of New York — HgTe quantum wells (QWs) have shown a number of interesting phenomena over the past 20 years, most recently the first two-dimensional topological insulating state. We have studied thermoelectric photovoltages of 2D electrons in a 6.1 nm wide HgTe quantum well induced by cyclotron resonance absorption ( $B = 2 - 5$  T) of a focused THz laser beam. We have estimated thermo-power coefficients by detailed analysis of the beam profile at the sample surface and the photovoltage signals developed across various contacts of a large Hall bar structure at a bath temperature of 1.6 K. We obtain reasonable values of the magneto-thermopower coefficients.

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