

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Spin galvanic effect between subband of InGaAs/AlGaAs 2DEG
JUNFENG DAI, XIAODONG CUI, The University of Hong Kong, THE UNIVERSITY OF HONG KONG TEAM — We report the electric current induced by optically injected spin current on the vicinity of a crossbar shaped InGaAs/AlGaAs two dimensional electronic gas (2DEG) without external electric or magnetic field at room temperature. The electric current is either both in-ward or both out-ward flowing through the crossbar, while the total Hall voltage or current remains negligibly. The geometric size, temperature and external magnetic field dependence of the electric current have been examined and the corresponding mechanism has been discussed.

Junfeng Dai
The University of Hong Kong

Date submitted: 23 Nov 2007

Electronic form version 1.4