

Supplementary Information

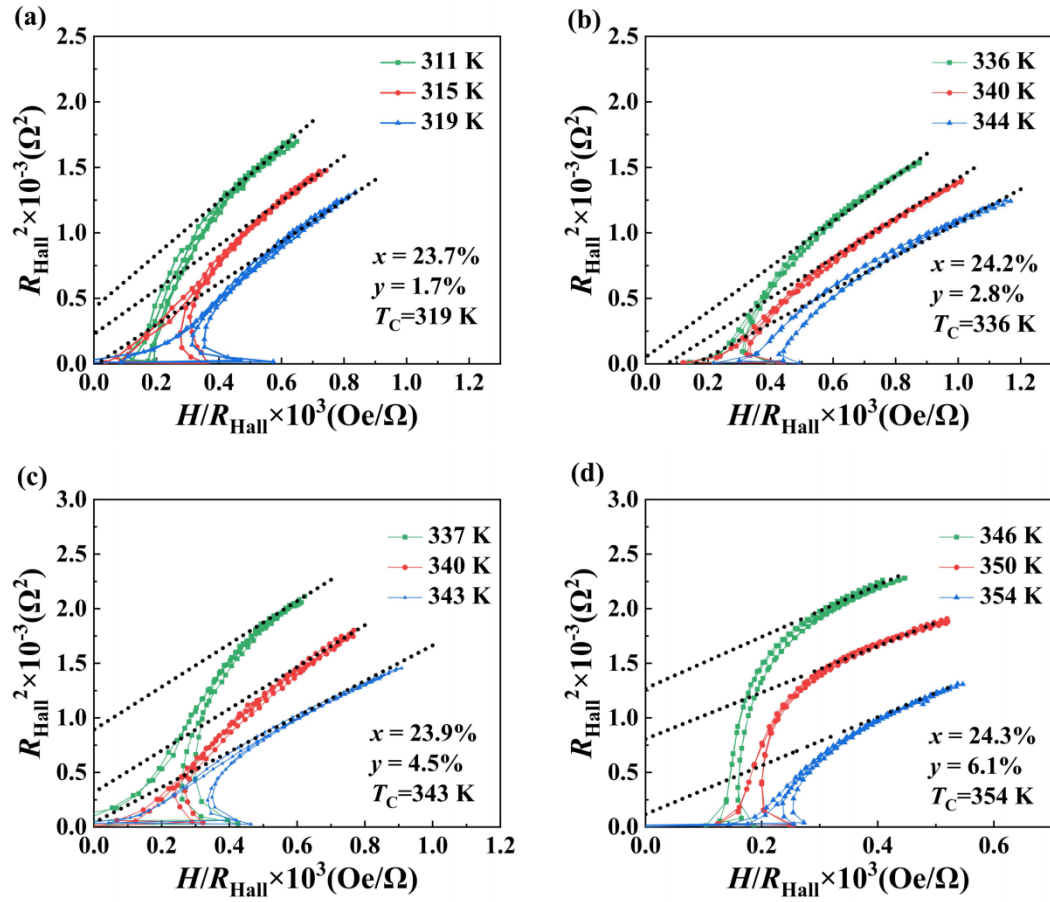
Enhanced magnetic anisotropy and high hole mobility in magnetic semiconductor $\text{Ga}_{1-x-y}\text{Fe}_x\text{Ni}_y\text{Sb}$

Zhi Deng^{1,2}, Hailong Wang^{1,2,†}, Qiqi Wei^{1,2}, Lei Liu^{1,2}, Hongli Sun^{1,2}, Dong Pan^{1,2},
Dahai Wei^{1,2}, and Jianhua Zhao^{1,2}

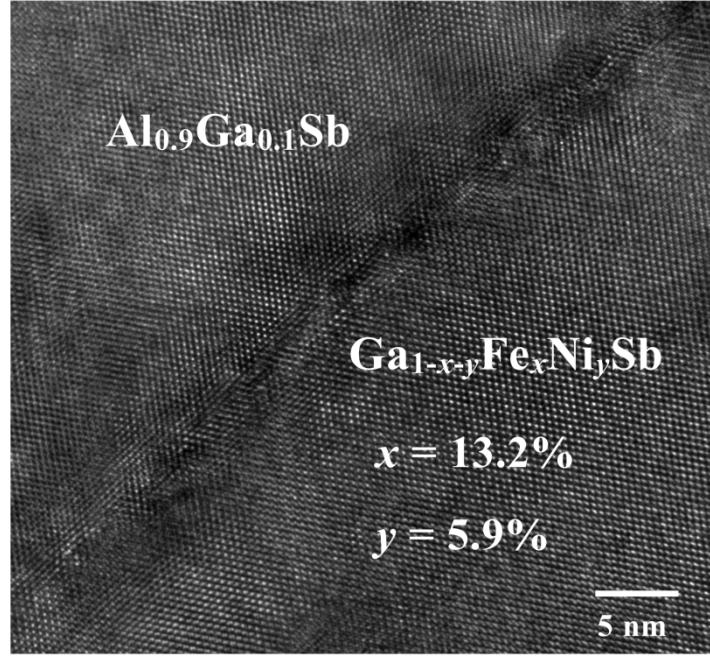
¹*State Key Laboratory of Superlattices and Microstructures, Institute of Semiconductors, Chinese
Academy of Sciences, P.O. Box 912, Beijing 100083, China*

²*Center of Materials Science and Optoelectronics Engineering, University of Chinese Academy of
Sciences, Beijing 100190, China*

Supplementary Figures



Supplementary Figure S1. a-d, Arrott plots of the $R_{\text{Hall}}-H$ characteristics of samples B1-B4 ($x \approx 24\%$, $y = 1.7\text{-}6.1\%$).



Supplementary Figure S2. A clear STEM image of sample S1 with low impurity concentration ($x=13.2\%$, $y=5.9\%$). When Fe concentration is over 20%, the ferromagnetism of $\text{Ga}_{1-x-y}\text{Fe}_x\text{Ni}_y\text{Sb}$ existed at 300 K would make great influence on the STEM images. Thus, a clear STEM image could only be obtained at the films with low doping concentration.