

Supporting Materials for

**Giant Magnetoresistance in Non-Magnetic Phosphoric Acid Doped
Polyaniline Silicon Nanocomposites with Higher Magnetic Field Sensing
Sensitivity**

Hongbo Gu,^{a,c} Jiang Guo,^a Huige Wei,^{a,b} Yudong Huang,^c Cunyu Zhao,^d Ying Li,^d Qingliu
Wu,^e Neel Haldolaarachchige,^f David P. Young,^f Suying Wei^{b,*} and Zhanhu Guo^{a,*}

^aIntegrated Composites Lab (ICL), Dan F. Smith Department of Chemical Engineering,
Lamar University, Beaumont, TX 77710 USA

^bDepartment of Chemistry and Biochemistry, Lamar University, Beaumont, TX 77710
USA

^cSchool of Chemical Engineering and Technology,
Harbin Institute of Technology, Harbin 150001, Heilongjiang, China

^dMechanical Engineering Department, University of Wisconsin-
Milwaukee, Milwaukee, WI 53211 USA

^eChemical Sciences and Engineering Division, Argonne National Laboratory, Argonne,
IL, 60439 USA

^fDepartment of Physics and Astronomy, Louisiana State University, Baton Rouge, LA
70803 USA

*Corresponding author

E-mail: suying.wei@lamar.edu (S.W.) and zhanhu.guo@lamar.edu (Z.G.)

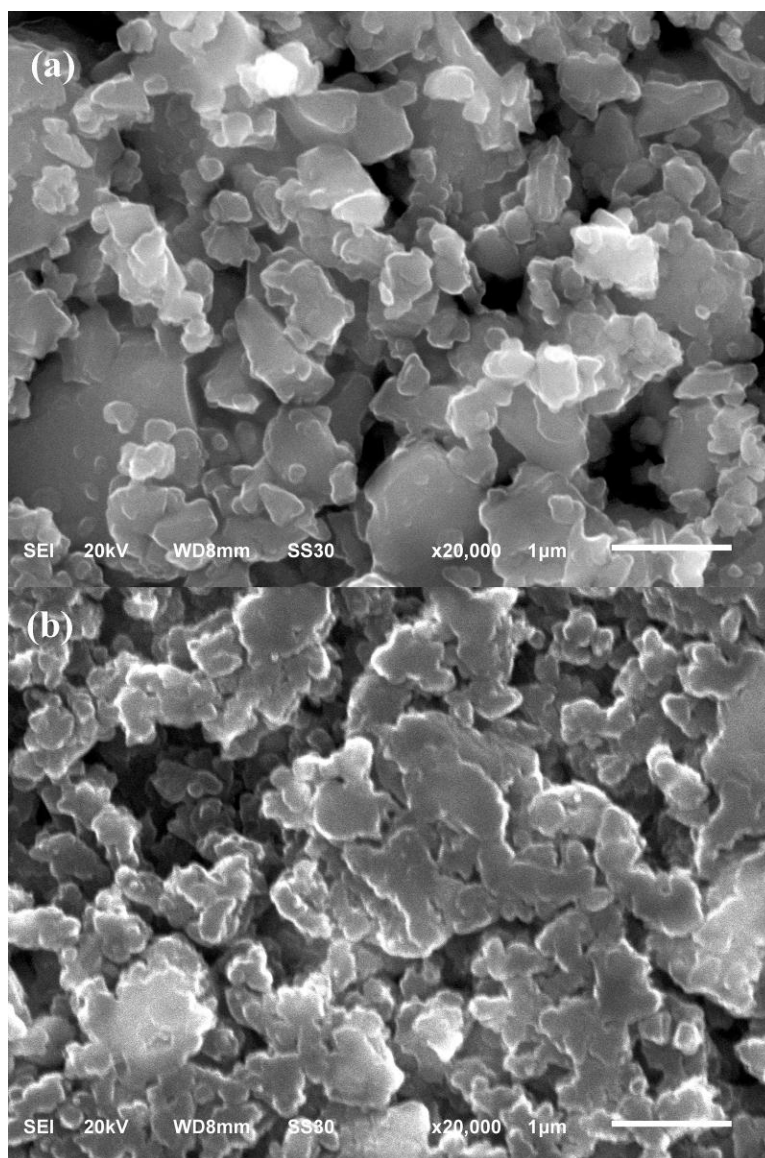


Fig. S1 SEM images of (a) the as-received silicon and (b) silicon/PANI polymer nanocomposites with a silicon nanopowder loading of 60.0 wt%.