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“Magnetoelectric Sensor Answers for Vehicle Detector”

ABSTRACT:

A new passive Magnetoelectric (ME) magnetic sensor which has been proved to be competitive as an efficient passive vehicle detector. Design and construction of the triple-axis ME sensor system were introduced which was comprised of Pb(Zr,Ti)-O$_3$/Metglas based sandwiched ME heterostructures and signal collection electronics. Results indicate that ME sensor is able to detect low speed moving vehicle with sensing range of 11 m whereas Fluxgate can’t achieve. The coherence of two ME sensors was evaluated, and the moving vehicle magnetic field signatures were obtained at $f = 2$ Hz.

BIO:

Ms. Shen Ying is a second-year PhD candidate whose research focus is on application study of Magnetoelectric sensor. She earned her Bachelor degree from China Agricultural University with major in Food Nutrition and Security in 2006. Then she joined in Virginia Tech Biological System Engineering department in 2008 and earned her Master degree in 2010.