

Future R&D strategies of magnetic MEMS/NEMS sensors

CheolGi Kim^{*}

Emerging Materials Science, DGIST, Hyeonpung, Dalseong, Daegu, 711-873, Korea

Magnetoresistance (MR) effects in magnetic multilayers are opening a new era not only in industrial applications especially related with information science and technology (HDD, E-compass), but also in bioassays. In this talk, firstly, I will overview the commercialized electronic compasses and their functions (Asahi Kasei, Yamaha, NVE etc.), and then would like briefly to introduce the industrial applications of MEMS/NEMS (GMR, AMR, PHR, TMR) sensors. Thirdly I will introduce the performance of GMR/PHR sensors and their novel applications like as biochips and magnetometry etc. Finally I will look up the future R&D strategies for new technological era of mobile and wearable devices.