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The spin Hall thermopile of Si/YIG/Co,Fe

The conversion of heat to spin current is well known as spin Seebeck effect. In this study, we observed spin voltage on cobalt (Co) and Iron (Fe) which acing for spin detector whereas the ferrimagnetic (YIG) is used for spin injector. The YIG is coated on Si-wafer by sputtering technique whereas the Co and Fe are prepared by thermal evaporation technique on zigzag pattern. We checked phase diagram, surface structure and magnetic property by XRD, SEM and VSM, respectively. We found that the spin Hall thermopile on Si/YIG/Co,Fe is enhanced by connected the Fe and Co on a series.

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