

# The studies on surface spin waves dispersion relations in $[\text{Ni}_{80}\text{Fe}_{20}/\text{Au}/\text{Co}/\text{Au}]_N$ multilayers with different direction of magnetization

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In  $[\text{Ni}_{80}\text{Fe}_{20}/\text{Au}/\text{Co}/\text{Au}]_N$  deposited on the silicon substrate, the surface spin waves dispersion relations are observed by Brillouin light scattering spectroscopy. The NiFe layer is characterized by in-plane anisotropy (magnetic easy axis in plane) while in the Co layer the direction of magnetization depends on the thickness of Co. We show that different dispersion relations for surface spin waves can be obtained by changing the thickness of the Co layer. The anisotropy of surface spin waves on surface of studied multilayers has also been shown.

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