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EXCITATION OF CONFINED ACOUSTIC VIBRATIONS BY  
INTERACTION WITH SURFACE PLASMONS IN Co-Ag MULTILAYERS

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Nanocomposite thin films containing alternate layers of Co and Ag nanoparticles (NPs) have been produced by alternate pulsed laser deposition. The separation between layers has been varied from 8 nm down to 4 nm. The plasmon-phonon interaction between these layers has been studied. When the separation is larger than 6 nm a single vibration band due to Ag NPs is observed in the Raman spectrum, whilst an additional band due to vibration of Co NPs appears when the layers are close enough. This suggests the existence of coupling between both types of NPs