

**Surface plasmon-enhanced photo-magnetic
excitation of spin dynamics in Au/YIG:Co
magneto-plasmonic crystals:
Supporting Information**

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This Supporting Information contains 3 pages and 2 figures.

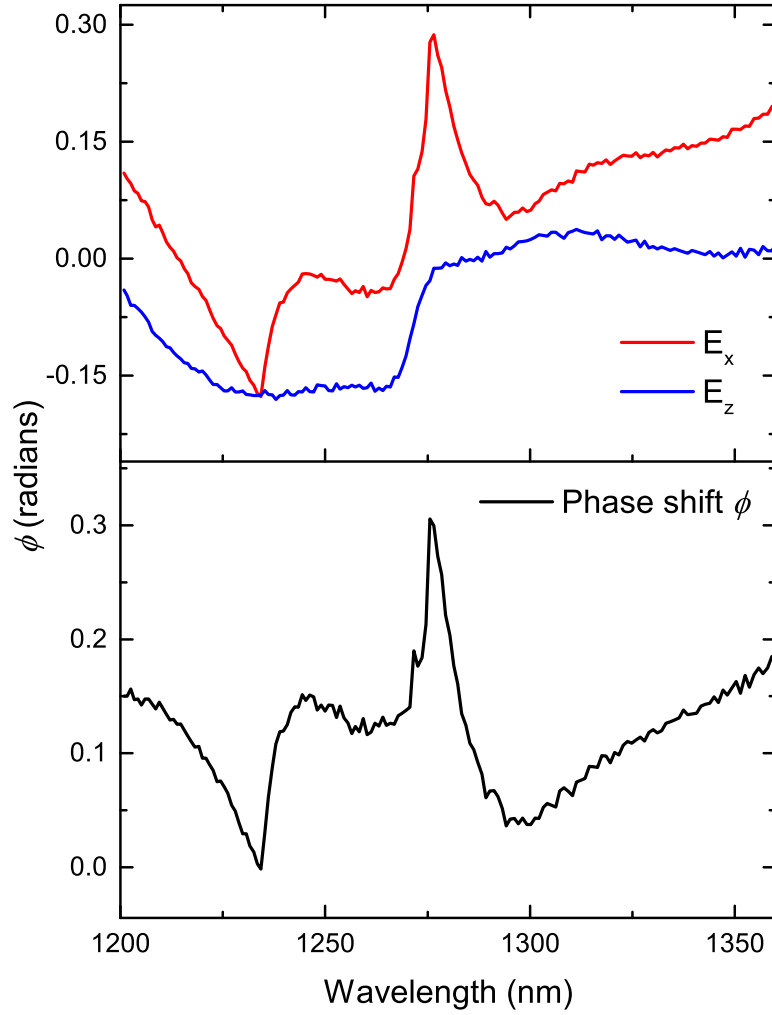


Figure S1: Numerically simulated spectral dependence of the phases (in the units of π) of the two projections of the electric field E_x , E_z at the Au/YIG:Co interface (top) and the phase shift ϕ between these projections (bottom). The narrow spike around 1275 nm corresponds to the SPP excitation at this interface.

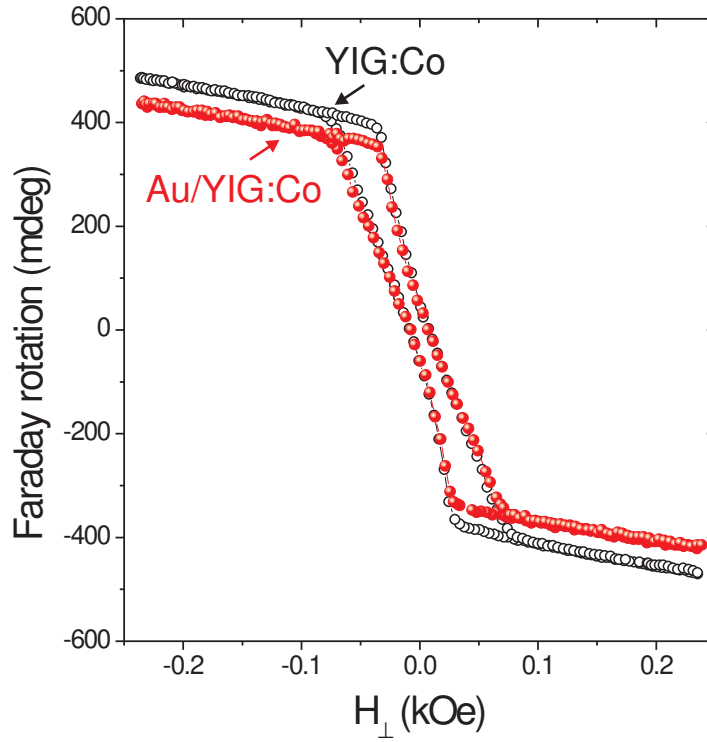


Figure S2: Experimental hysteresis loops of the Faraday rotation obtained on the bare YIG:Co garnet (black) and the Au/YIG:Co magneto-plasmonic grating (red) at the 800 nm wavelength. The external magnetic field is applied perpendicular to the sample plane. The slope is due to the paramagnetic contribution from the GGG substrate.