IMPACT Center SAB/Liaison meetings
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Abstract

Prof. Peter Asbeck, UCSD

Improving Interconnects At Microwave Frequencies By Skin Effect Mitigation

This project explores increasing conductivity of interconnects at 10-90GHz using multilayer structures of copper or gold in combination with ferromagnetic materials. At targeted frequencies, the net magnetic permeability can be decreased to near zero, thus extending the skin depth from 0.25um in the mm-wave regime to above 1um. Initial ferromagnetic resonance measurements of Fe0.5Co0.5 thin films have been carried out, showing high magnetization (2.275T) and low damping factor (0.014), which are critical for high frequency performance laminates.