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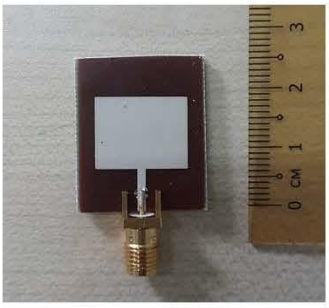
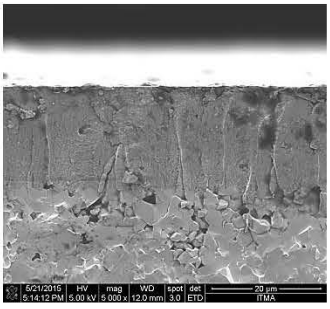
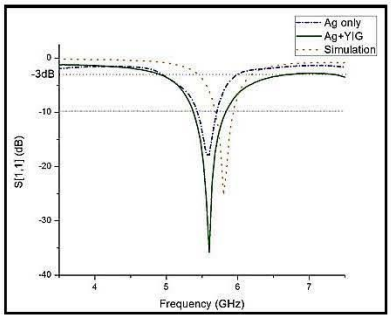
RESEARCH HIGHLIGHTS

1. Ferrites based Thick Film for Performance Enhancement of Patch Antenna

This project proposed a novel ferrite thick film paste using nanosized ferrite powder and linseed oil based organic vehicle which have never been reported before. By utilizing thick film technology, microstrip patch antenna has been able to fabricate with improved performance using common FR4 substrate. Thick film technology also contributes in terms of ease of fabrication, with ability to screen print prepared thick film paste on any desired substrate.



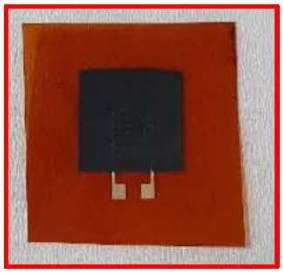


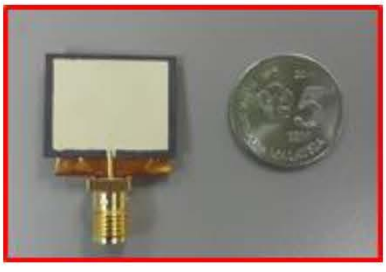


Intan Helina Hasan, Mohd Nizar Hamidon, Alyani Ismail, Ismayadi Ismail, Anwer Sabah Mekki, Muhammad Asnawi Mohd Kusaimi, Saman Azhari,and Rosiah Osman, 'YIG Thick Film as Substrate Overlay for Bandwidth Enhancement of Microstrip Patch Antenna', IEEE Access, 6 (1): 32601-32611, 2018.

2. Carbon-based Thick Film With Organic Binder For Printable Flexible Electronic Devices

This project aims to explore the possibilities of using nanosized carbon materials as conductive elements for thick film paste for fabrication of flexible devices, such as patch antenna and gas sensor. The main contribution or novelty of this project is the development of flexible, dual functioning wireless gas sensor using carbon-based materials, which also can be a hybrid of CNT-graphene or graphenated CNTs.





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