

Optical Dielectric Antenna and Enhance its Bandwidth with Minimum Energy Loss

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Abstract - The Dielectric Antenna has unique attraction for communication community which enables the nanotechnology, Nano- devices to controlled tele medicinal treatments, IOT, with high impedance bandwidth. Antenna is the one of the key component of any transmitting or receiving devices. So antenna material must have suitable for desire requirement of communicational system with low cost Antenna multi-band or wide-band antennas applications for multiple resonances which have unique capability to full fill our requirement. DRA has unique capability to modify as well as tune it's a reconfigurability of antenna applications. The Dielectric mater have unique quality to preserve electric field. The dielectric Antenna depends up several Parametrical Concepts for DRA antenna designing technique must have Antenna impedance which can be converted to optical frequencies, Dielectrics are playing very important role to design new way fabrication of Antenna for modern communication system, which has so, needful requirement in modern Scientific Applications.

Key Words: DRA Antenna, bandwidth, Electromagnetic Spectrum, Nano electronic, optics, Optical Antenna, Radio wave or microwave Antenna theories.

1. INTRODUCTION

The World Communication has defined an which means up and the terms 'ten' which can be say Stretch. The communication Community has used Optical Antenna to Convert Energy for free localizes Propagation [1,2]. This can be Possible only Radio Wave or Micro-Wave Antenna frequency range[3,4]. Antenna is the one of the key component of any transmitting or receiving devices. The function of light -Emitting devices to enhance its efficiency which play very key role for photovoltaics, Spectroscopy[5,6]. The Dielectric Antenna has great Advantages to Control its directivity. The Optical Antenna Manipulation to improve its bandwidth [7,8]. we have proposed very recent and new method which has great Advantages to Enhancement of bandwidth with minimum energy loss[9,10]. The antenna bandwidth enhancement depends upon its Shape, Element, and Materials to make its Perfect condition to Simulated its design for Fabrication of Antenna with low profile ma king cost [12, 15]. The DRA antenna has Key Applications to provide technology for devices like cellular Phone, televisions which have mostly used in Radio wave or Micro Wave Regime Scale of EM (Electromagnetic Spectrum)[16,19]. Now a day's technologist uses Dielectric Antenna in the field of Optics because it has

great Advantages to explore it ability for the purpose to establish Radio wave or microwave Antenna theories to develop Communication System with high efficient method to enhance the characteristic of DRA antenna for high permittivity materials.

In this research article we proposed high efficiency of Antenna to controls its configurability. This research work will be very helpful for future challenges of DRA design as well as benefited to antenna community. The dielectric properties has directly concern with strong system as well as electric and magnetic energy of materials[25]. The dielectric has great Advantage to explain about various Phenomena in electric, Nano electronic, optics, Opto-electronic, physics, solid state physics, biophysics. In the modern approach to dielectric standard model can use to place on top of DRA Antenna to generate circular polarization field.

2. DRA Antenna Range

DRA Antenna has unique ability to effect on metals which has driven by light and also effect on magneto optics. The dielectric antenna has novel application for mobile communication system which can be operated on GHZ, THZ band which has useful for the integration of Nano-photonic and Nano magnetism on single chip -level which increases data rate. DRA antenna Networking depends on permittivity of antenna material has great potential to achieved radiation in db- deviation is increased with very less variation patter of antenna.

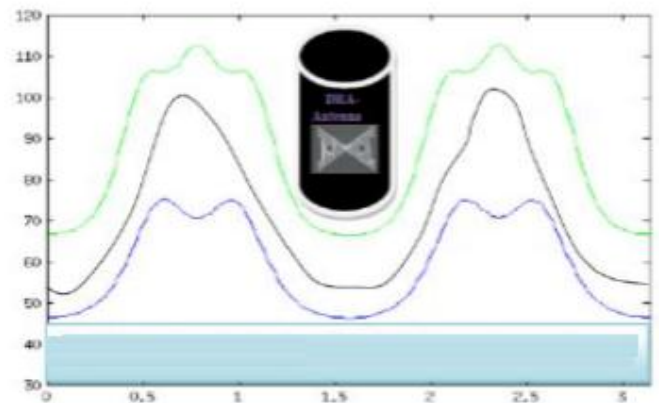


Figure1:-Directivity for surface Optical dielectric Antennas Array.

Return loss plot of the proposed DRA antenna at nm scale

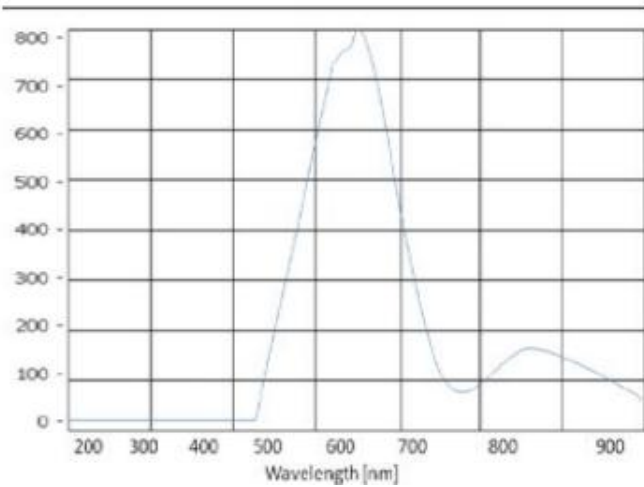


Figure2: Cylindrical-DRA-Antenna at nm

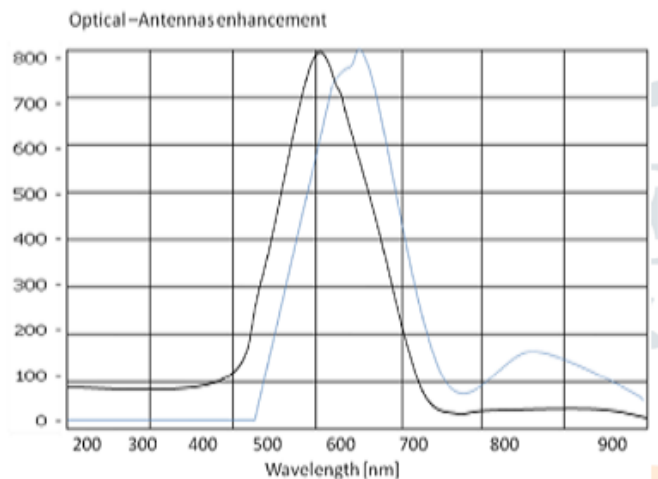


Figure 3: Optical DRA Enhancement



Figure 4: Cylindrical Optical DRA Antenna Model

3. DIELECTRIC RESONATOR OPTICAL- ANTENNA FOR BROAD CAST SYSTEM

Dielectric Resonator Antenna for Broad Cast System has certain limitations for best require Performance to navigate system .The navigation system uses large variety of Radar system which demands high level Antenna system. Performances are evaluated on the basic of its Application Performance for wireless and cellular system. DRA Antenna has unique Capability to fulfil all the requirements of operational communication system. We have used Antenna system for communicate or Transmits Radio signal to one station to another station .The both purpose can be done to use dual pattern diversity of antenna for Body Area Networking which plays an Important role in current Scenarios.

4. CONCLUSIONS

We have reviewed several aspects and applications of optical antennas. In particular focused on The Dielectric Antenna Transmit Optical Frequency at nm scale. Dielectric Antenna has great theoretical aspect to design & control communication system for maxima level transmission efficiency. Optical radiation distribution of electromagnetic range of Antenna frequency .The antenna Fabrication methodology concentrates on uses material to fabricate antenna .The simulation of Antenna design works well with Dielectric constant to tune resonance frequency can enable to control its configuration THZ, nm scale , The Dielectric Antenna has unique attraction for communication community which enables the nanotechnology, nano - devices to controle tele medicinal treatments, IOT, with high impendence bandwidth.

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