

Review of: "Investigations on Input Impedance and Radiation Pattern of a UWB Antenna for Microwave Imaging"

Likaa S. Yahya

Potential competing interests: No potential competing interests to declare.

In the manuscript "Investigations on Input Impedance and Radiation Pattern of a UWB Antenna for Microwave Imaging," the authors have explained a method of reducing the back radiation and improving the impedance matching of the UWB antenna.

1- This paper doesn't contain novelty for designing UWB antennas for microwave imaging.

2-In the related works, the authors did not provide a comprehensive study of previous work and what would be added to the research compared to previous work.

3- Most of the figures in the manuscript refer to previously published research.

4- There are no modern sources in the list of references except ref. no. 10, which belongs to the authors.

5- Lack of clarity in discussing the results.

a- On page 21, line 10, the realized gain achieved is 6.6dB, and gains of 0.825dB and -25dB are achieved in the y-plane and z-plane, respectively.

b- In Figure No. 24, the simulation results were compared with the practical results. The simulation results in Figure 23 do not appear to resemble the simulation results in Figure 24, in addition to the fact that Figure No. 24 is present in ref. No. 10.

c- Figures 27, 28, 29, and 30 were drawn at $\phi = 90$, while figures 20, 21, and 22 were drawn at $\phi = 0$. In order for the comparison to be correct, it is preferable to draw all shapes at $\phi = 0$ and $\phi = 90$.

d- The authors did not draw results for the S11 parameters after increasing the size of the reflector for better understanding of its performance.

6- There is no comparison between the authors' results and relevant works.