

# Dynamically tunable resonance behavior in terahertz metamaterials using 2-D materials – Science and Engineering Research Board (SERB)



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The aim of this project is to investigate dynamically tunable responses in terahertz metamaterials and waveguide configurations using 2D materials. For this purpose, several metamaterials and waveguide configurations were designed and investigated to study the optical response. As part of this project, many scientific articles listed below have been published:

- ❖ Bhattacharya, Angana, et al. "Multiband transparency effect induced by toroidal excitation in a strongly coupled planar terahertz metamaterial." *Scientific Reports* 11.1 (2021): 1-9.
- ❖ Bhattacharya, Angana, Rakesh Sarkar, and Gagan Kumar. "Excitation of near field coupled dual toroidal resonances in a bilayer terahertz metamaterial configuration." *Journal of Physics D: Applied Physics* 54.28 (2021): 285102.
- ❖ Dhriti, K. M., et al. "Plasmon-induced transparency in an air–dielectric grooved parallel-plate terahertz waveguide." *JOSA B* 38.4 (2021): 1290-1296.

