

Tuneable Complex Permittivity and Permeability of Silver-Epoxy Nano-Composite by Percolation Effect Over a Wide Bandwidth

Wednesday, 13 March 2024 17:15 (5 minutes)

The percolation theory has garnered extensive attention over the last four decades in the context of permittivity and conductivity, with a noticeable gap in the exploration of permeability. This research delves into the percolation phenomena's impact on the permittivity, permeability, and conductivity of a silver-epoxy nano-composite. The identified percolation threshold falls within the range of 26.3% to 26.4%. At this threshold, the dielectric constant exhibits a remarkable increase, reaching up to 390, accompanied by a permeability of 0.31 in close proximity to the threshold.

Primary author: TSENG, Bo-Wei

Presenter: TSENG, Bo-Wei

Session Classification: Poster

Track Classification: Poster section