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Editorial Note

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Seeking a microwave absorption material in the realm of agriculture

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ABSTRACT

Agricultural waste composites might be selected as an absorber material for microwave application. In the present work, optical properties of rice husk/Polycaprolactones (PCL) Composites, which are placed inside a rectangular waveguide, are investigated based on the method of discrete dipole approximation (DDA). The scattering, transmittance and absorption results have been gained, then, extinction spectrum is deduced. Impact of composite's size on optical properties is also simulated and analyzed. It is found that the thicker the sample, the more suitable for application as a microwave dummy material. It is concluded that rice husk/PCL composites will be a good candidate for microwave dummy material with wide applications.

Keywords: Rice husks; Rectangular waveguide; Optical properties; Discrete dipole approximation; Extinction spectrum.