[4th, June, 2024]

Dear Editor:

I wish to submit a manuscript entitled “ELECTRO-MECHANICAL RESPONSE OF STRETCHABLE PDMS COMPOSITES WITH A HYBRID FILLER SYSTEM CONSISTING OF AGNW/CNT/PEDOT:PSS” for publication in *FACTA UNIVERSITATIS*

*Series: Mechanical Engineering.*

The increasing demand for miniaturization, high-power density, and high-frequency electronic devices highlights the importance of polymer composites with high electromagnetic interference (EMI) shielding. These composites are crucial to maintaining devices, reducing communication errors, and protecting human health. In this study, we developed a mechanically pressed composite of polystyrene, MXene, and boron nitride nanosheets (BNNSs) with a 3D structured filler network through electrostatic interactions and the hot-pressing technique. Constructing a 3D filler network within the composite led to a significant EMI shielding effect, particularly in the low-frequency range. Furthermore, it was observed that the BNNSs-coated sample contributed to superior EMI shielding effectiveness compared to the non-coated sample. This suggests that BNNSs improve the EMI shielding effectiveness by providing additional interfaces within the composite and help prevent the degradation of MXene. We expect our study to provide valuable insights into the development of 3D structured filler networks within composites while contributing to improvements in thermal conductivity and EMI shielding performance.

This manuscript has not been published or presented elsewhere in part or in entirety and is not under consideration by another journal. We have read and understood your journal’s policies, and we believe that neither the manuscript nor the study violates any of these.

Thank you for your consideration. I look forward to hearing from you.

Sincerely,

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