[19th, December, 2022]

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.*

With the technological development of wearable devices, there are increasing demands for stretchable conductor that have stable electro-mechanical performance. In this study, a stretchable PDMS composite electrodes using ternary systems of fillers consisting of poly(3,4-ethylenedioxythiophene):poly(styrenesulfonate) (PEDOT:PSS) / carbon nanotube (CNT) / silver nanowire (AgNW) is explored in a perspective of electro-mechanical response. PDMS matrix is mixed with binary fillers of CNT and PEDOT:PSS, which is followed by AgNW peeling-off process. The PDMS composite is mechanically reliable especially under tensile deformation, which showed a high rupture strain of ~102 % and tensile strength of ~2.7 MPa. In addition, the PDMS composites shows the stable electro-mechanical response, where high electrical conductivity is sustained even under stretchable conditions, showing an electrical resistance value of ~11.7 Ω/cm under 40% of strain. As a demonstration, a supercapacitor using the PDMS composites is demonstrated that shows reliable electrochemical 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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