Studies on EMI shielding capability of Zirconia incorporated carbon nanofiber mats/Epoxy composites

Battula Durga Siva Deeraj*, Kuruvilla Joseph
Department of chemistry, Indian Institute of Space Science and Technology, Trivandrum
deeraj4mech@gmail.com

Introduction to EMI Shielding

Electrospinning is one of the versatile technique to form continuous nanofibers from polymer solutions.

The authors would like to acknowledge STIC, CUSAT and Dr. Surya Sarathi Bose, IISc Bangalore for help in characterization of samples.

Results and Discussion

EMI Measurements

Conclusions

Zirconia embedded carbon nanofibers were prepared successfully by electrospinning and subsequent carbonization.

Electrospinning fibers as EMI Shields

EMI Measurements

Conclusions

Zirconia embedded carbon nanofibers were prepared successfully by electrospinning and subsequent carbonization.

Further these mats are incorporated with epoxy and epoxy laminates were prepared

These epoxy laminates are observed to have good mechanical properties as well as enhanced EMI shielding capability.

References

1. N.G. Rim et al., Current approaches to electrospun nanofibers for tissue engineering, Biomaterials 81 (2017) 104-119
5. https://socratic.org/questions/5716864011ef6b647cb464d9

Further work and characterizations are in progress

The authors would like to acknowledge STIC, CUSAT and Dr. Surya Sarathi Bose, IISc Bangalore for help in characterization of samples.