

Thermally-Conductive, Electrically-Insulating, Silicon-Containing Epoxy Molding Compounds (Si-EMCs)

Disclosure Number

201102561

Technology Summary

The new and herein described silicon-containing epoxy molding compound (Si-EMC) will possess a unique combination of having high thermal diffusivity, electrically insulative character, and low cost. Epoxy materials are inherently poor thermal conductors by themselves, so the achievement of high thermal conductivity EMCs will be accomplished through the innovative use of using controllably milled and sized silicon (Si) powder as a filler material in the EMC. Other filler material has been used in EMCs to increase thermal conduction while sustaining electrical insulative character; however, the use of Si filler has not been utilized before and its produced advantages (high thermal conductivity and low cost) make it an attractive alternative.

Inventor

WERESZCZAK, ANDREW A

Materials Science and Technology Div

Licensing Contact

DETRANA, ALEXANDER G

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 139, Bldg 4500N, MS: 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 576-9682

E-mail: DETRANAAG@ORNL.GOV

Note: The technology described above is an early stage opportunity. Licensing rights to this intellectual property may be limited or unavailable. Patent applications directed towards this invention may not have been filed with any patent office.