

AEROGEL-BASED COMPONENTS AND SYSTEMS FOR ELECTRIC VEHICLE THERMAL MANAGEMENT

Abstract

Aerogel-based components and systems for electric vehicle thermal management are provided. Exemplary embodiments include a heat control member. The heat control member can include reinforced aerogel compositions that are durable and easy to handle, have favorable performance for use as heat control members and thermal barriers for batteries, have favorable insulation properties, and have favorable reaction to fire, combustion and flame-resistance properties. Also provided are methods of preparing or manufacturing such reinforced aerogel compositions. In certain embodiments, the composition has a silica-based aerogel framework reinforced with a fiber and including one or more opacifying additives.

[FIG. 5]