OAK RIDGE NATIONAL LABORATORY
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Infrared Signal Generation via AC Induction Heating of Graphite Foam

Disclosure Number

201303066

Technology Summary

The present invention comprises a method to use graphite foam to heat with an AC induction field to generate a high output of IR energy for signaling. For the purposes of runway lighting, for example, each light needs to output about 8W of IR energy between the 760 and 1100 nm wavelengths. A prototype foam system was heated with AC induction heating to show that 8 W/cm(sq.) of power can be attained at 650 °C. This is much lower temperature than tungsten filaments used in incandescent bulbs, thus making for more efficient conversion of electricity to IR energy.

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