

“Transient Polymers for low-k Dielectrics and Decomposing Electronic Devices”

Reginald R. Baxter Lecture



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171 Durham, September 29th at 11:00 a.m.

Dielectric materials (i.e. insulators) provide critical functions throughout the packaging hierarchy, including on-chip dielectrics, package substrates, and printed wiring boards. Transient polymers, those which vaporize on command, can be used to form ultra low-k dielectrics, such as porous materials or air-cavities. Transient polymers can also be used as coatings or structural materials in electronic packages and devices enabling the disappearance of the device when the collection, recovery or disposal of the device is difficult.

In this presentation, the motivation and opportunity for improved electronic materials will be presented. The nature of transient polymers will be described including their synthesis, physical properties, and chemical reactivity. Transient polymers can be decomposed into the liquid or gaseous state when exposed to thermal, chemical or photo-chemical stimulus. Finally, several applications for transient polymers in the fabrication of unique electronic devices, structures or packages will be described.

**Refreshments
will be provided
in 2061 Sweeney
Hall at 10:30 a.m.**

*If you plan to attend,
email a question to
bellinda@iastate.edu
and the speaker will
answer your question!*

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