Amgen Seminar Series in Chemical Engineering
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New Insights on Liquid Impact and Dispersion

By

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Sandia National Laboratories is interested in high speed, large liquid slug impact and dispersion in support of vulnerability assessment for fuel ignition and combustion. There is no previous research done in this area because prior work has focused on relatively small-Weber-number ($We < 10^4$) impacts meant for regimes related to processes such as ink jet printing, material coatings, and internal combustion. Our experimental and model simulation results for high Weber number impacts (up to 10^8) have provided valuable information on high-speed fuel impact and dispersion as well as new insights for droplet impacts for all regimes. This new insight has also led the research to re-visit and include applications regarding processes for low-Weber-number droplet impact.

Sandia is a Department of Energy National Nuclear Security Administration laboratory with strong research connections to the Department of Homeland Security. The laboratory has robust programs in materials science, combustion, reactive flow and transport, stockpile stewardship, and alternative energy to name a few. I will be available after the presentation to discuss Sandia's aggressive hiring campaign planned for this fiscal year.

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