

# Clean Technologies for Tomorrow

Commercialization Opportunities for the TCRD & Beyond



**Pacific Northwest**  
NATIONAL LABORATORY

*Proudly Operated by Battelle Since 1965*



**Pacific Northwest**  
National Laboratory

**Idaho**  
National Laboratory

**Lawrence Livermore**  
National Laboratory

**National Renewable  
Energy Laboratory**  
(Single-Program)

**Battelle**  
Columbus, Ohio

**Oak Ridge**  
National Laboratory

**Brookhaven**  
National Laboratory

Where innovation begins...

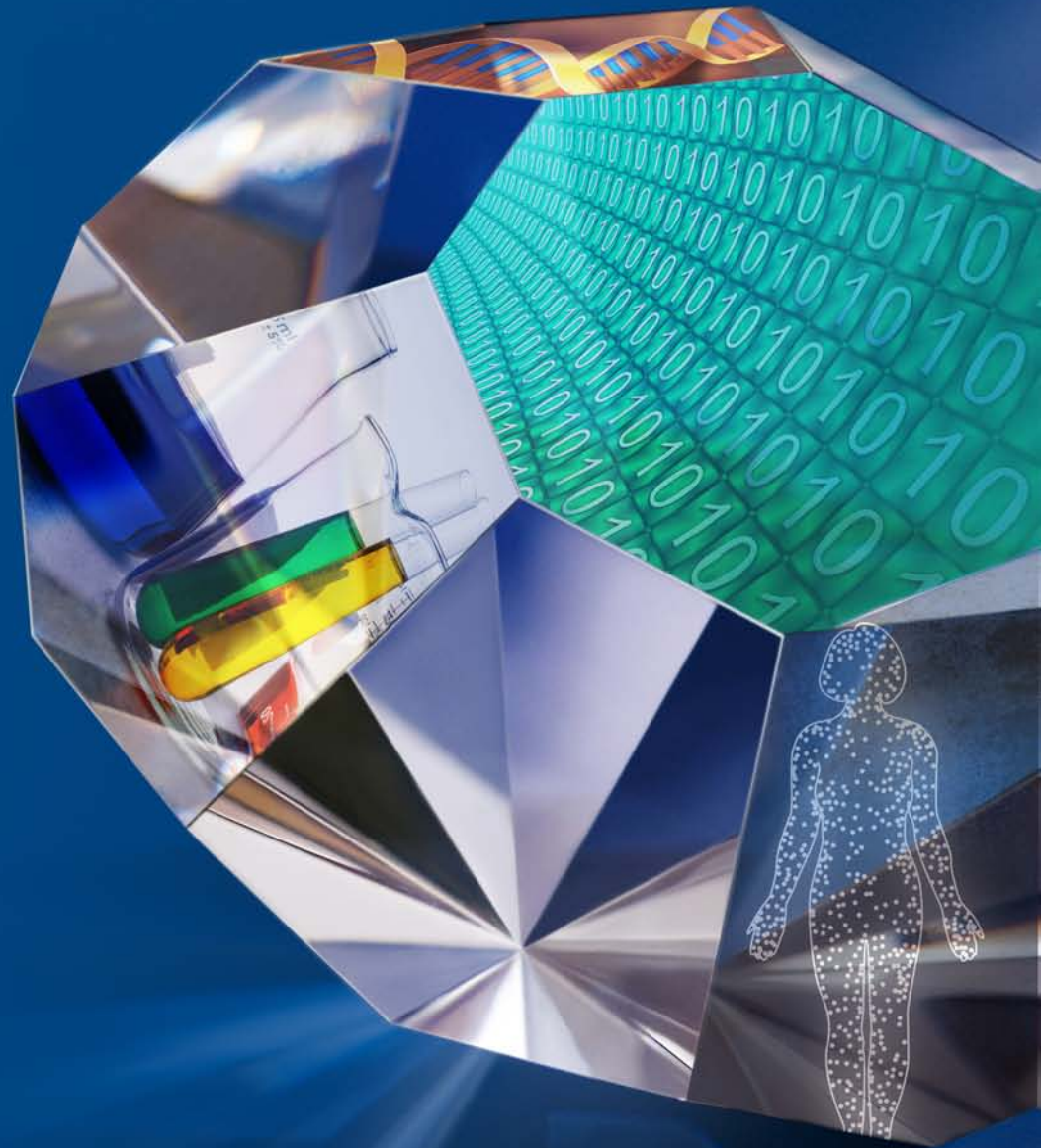


...and people discover *together*.



Our staff is diverse.

The way  
we work  
is *unique*.





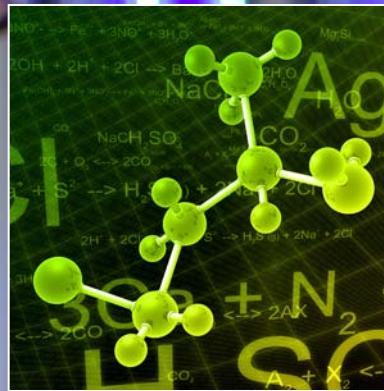
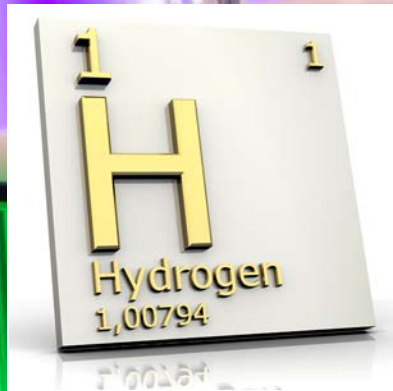
We are  
solution  
providers.

Assets and  
innovation...

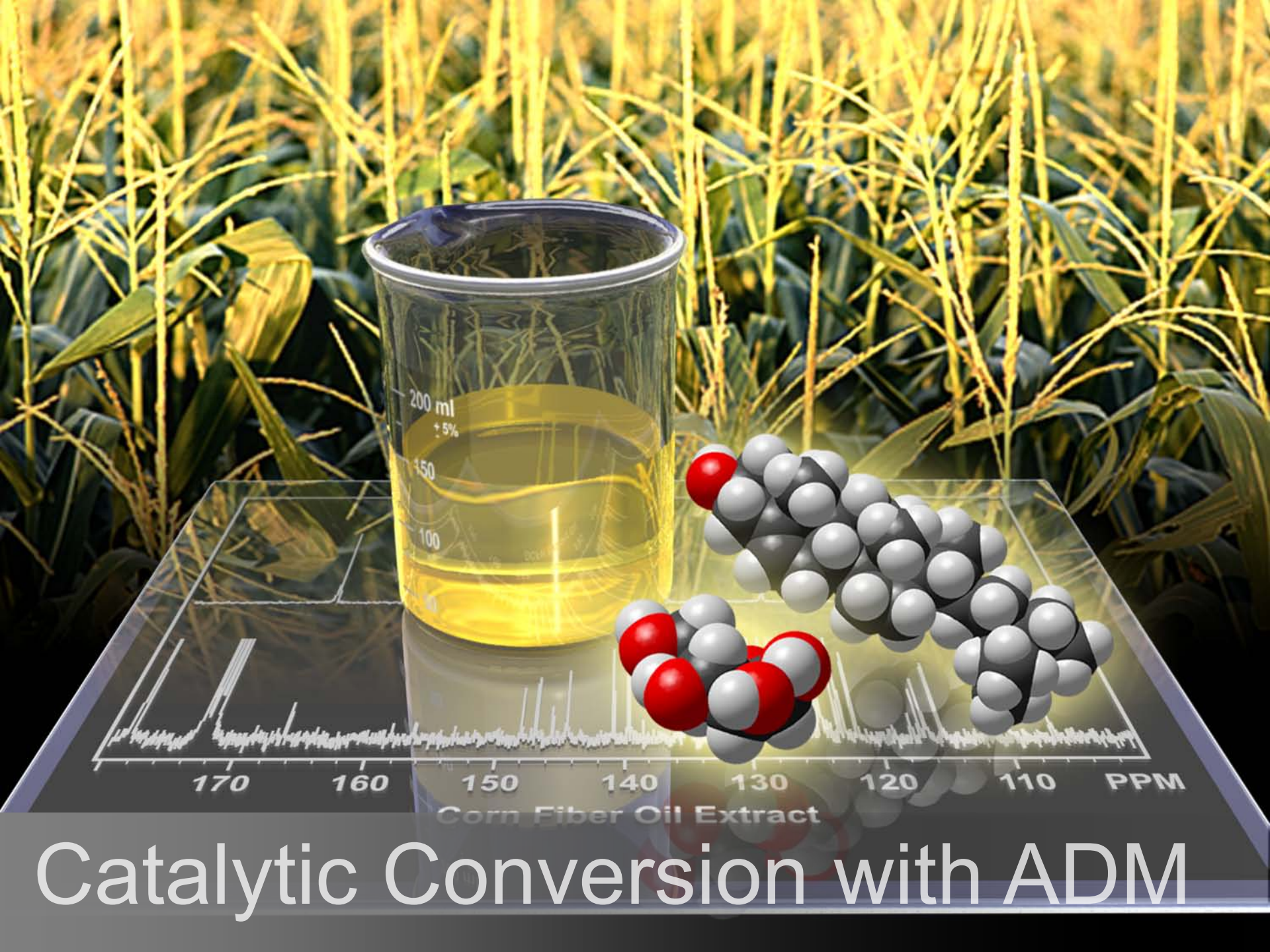


solutions  
to market.

# The Chemistry and Physical Sciences Portfolio

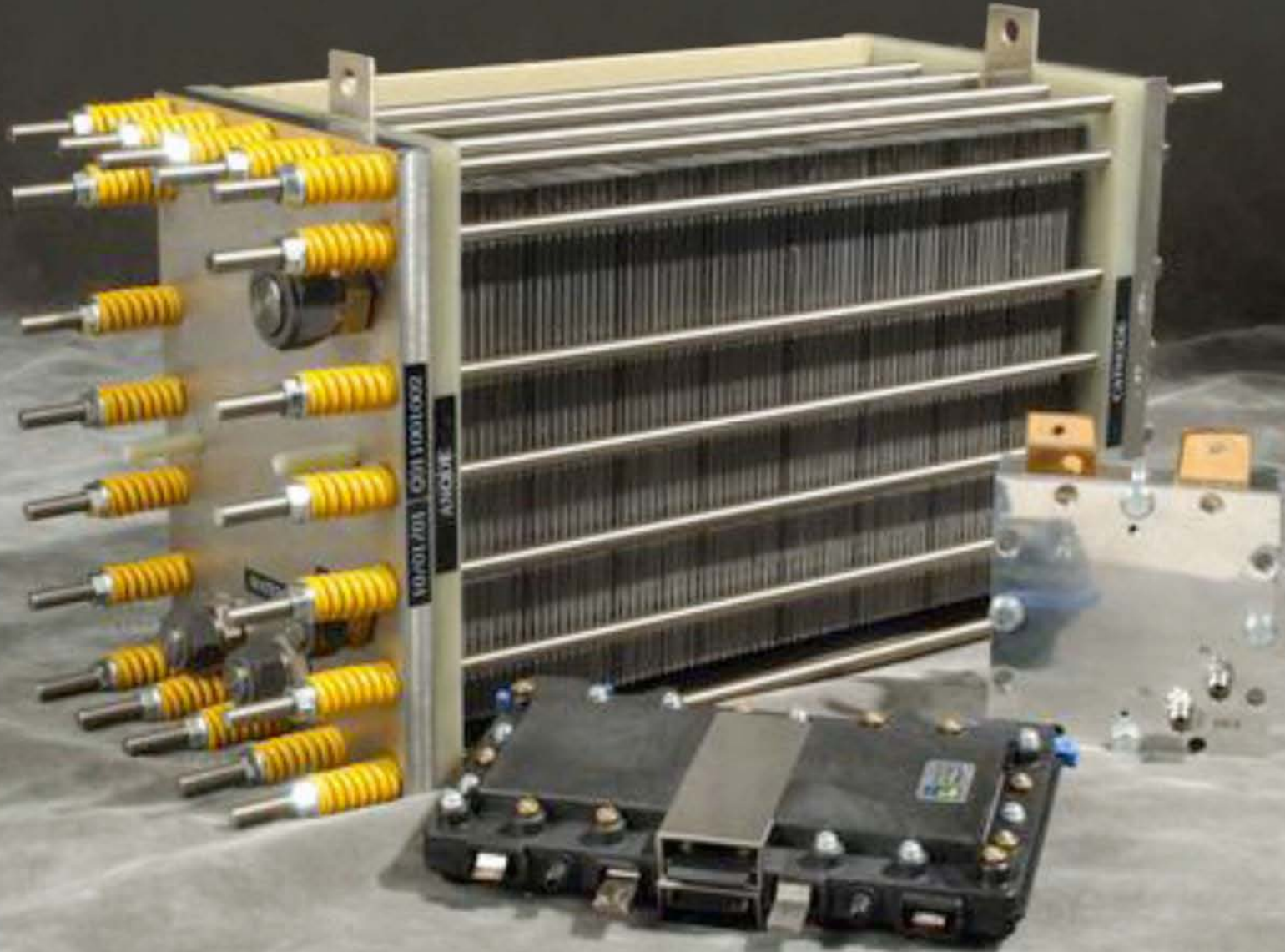




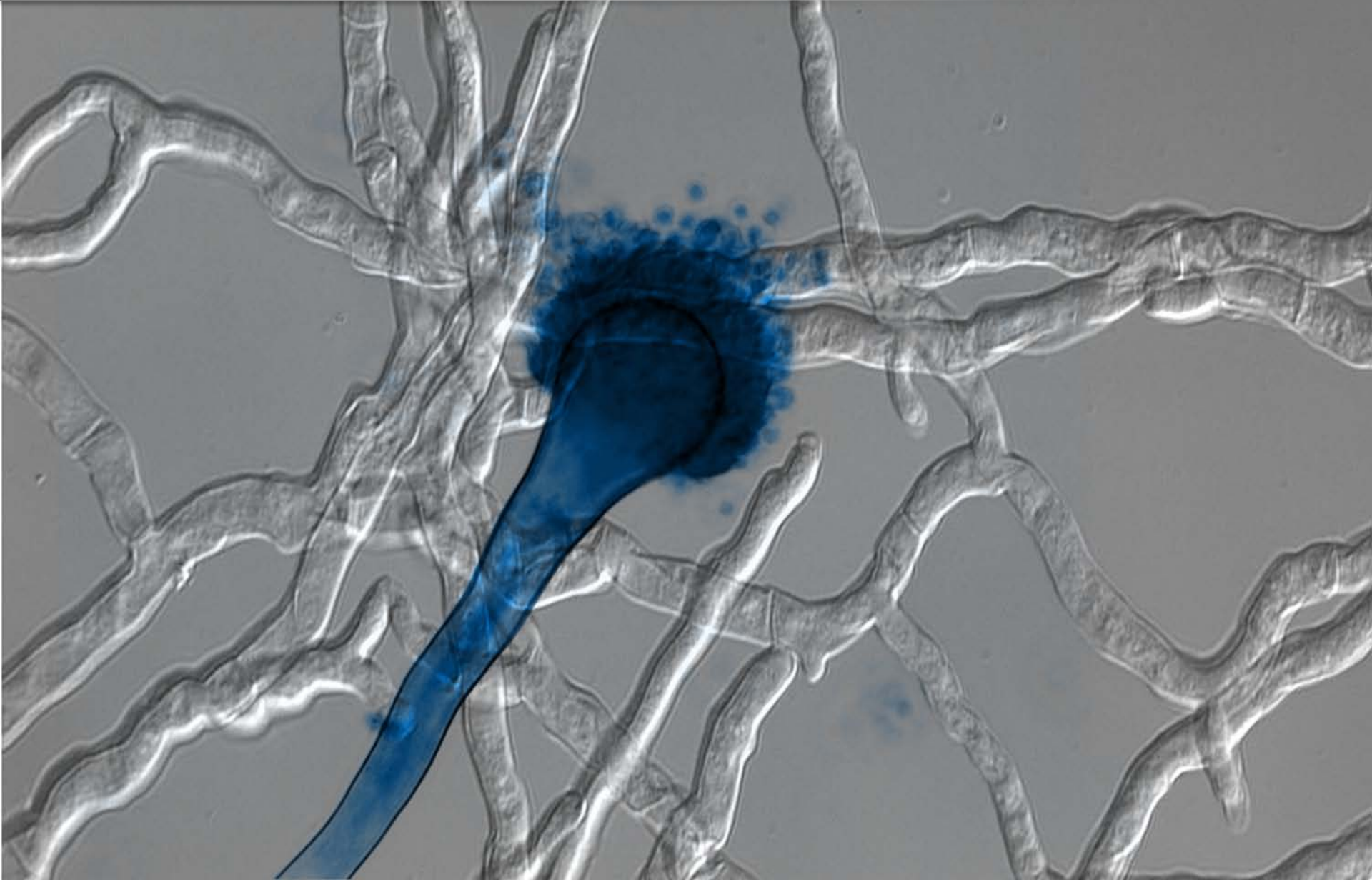


# Catalytic Conversion with ADM

# Hydrogen Storage (Boranes)



# Fungal Biotechnology



# Oxidized & Reduced Derivatives of HMF (hydroxymethyl furfural)





# Conversion of Levulinic Acid to Methyl Tetrahydrofuran

# The Energy Portfolio





Ambient Energy Harvester

# Grid Scale Storage



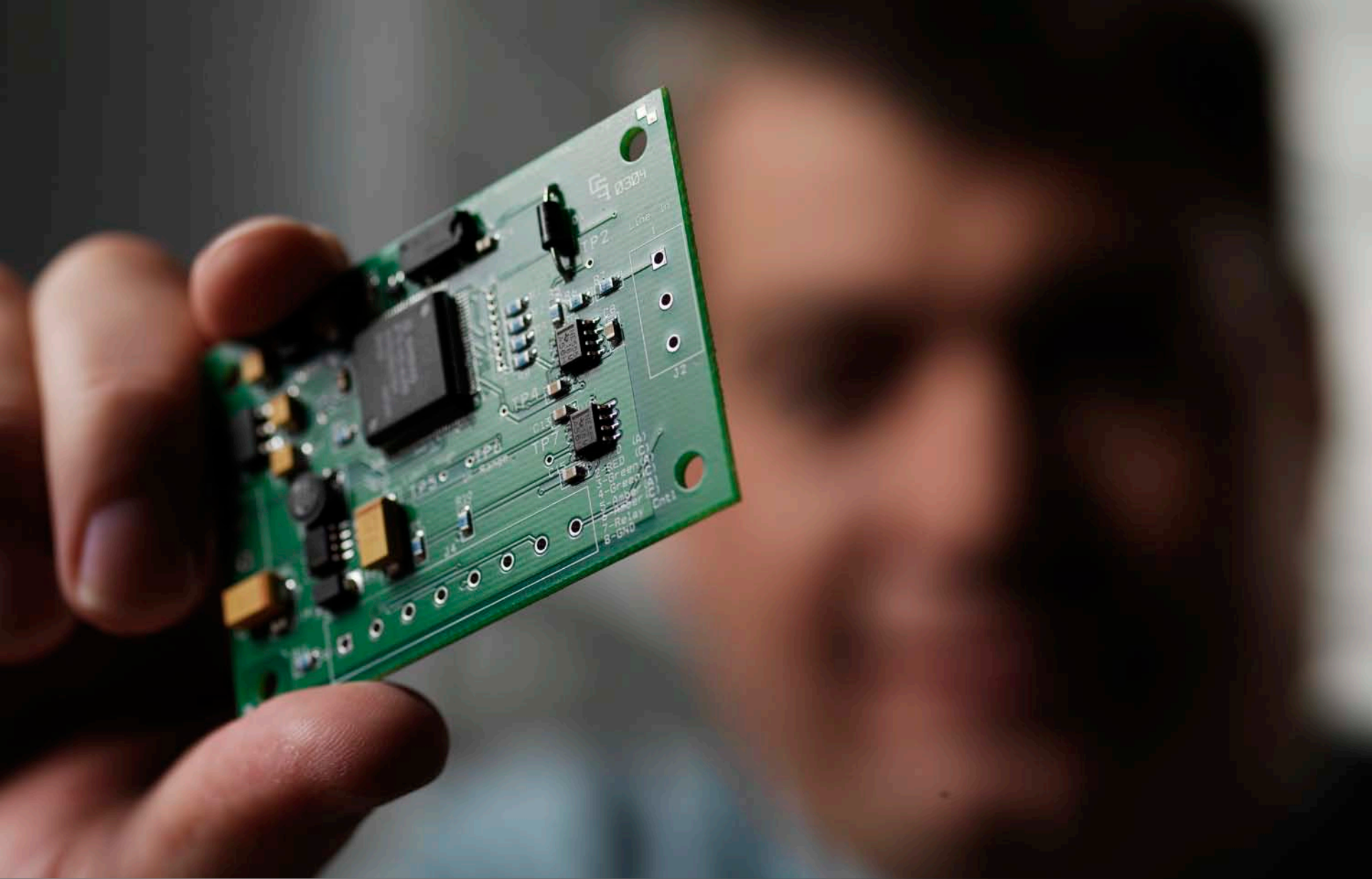


# Transportation Storage





# Smart Charger Controller



# Demand Response & Regulation

# Building Efficiency Technology





Details

ScoreCard Chart Table Notifications Admin

Load Profile CUSUM

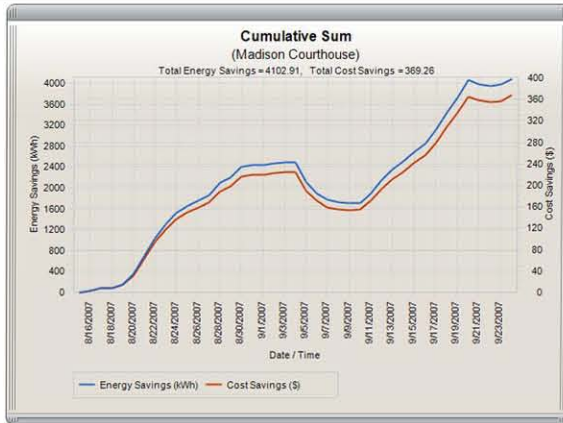
Period Start

8/15/2007

Period End

9/25/2007

Draw Chart



# Diagnostics Software

Working with us is easy.





# Availabletechnologies.pnl.gov



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# We're open for questions...



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*and business!*