

**Fall  
2012**



**Lab  
Notes**



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### Hydrogen Gas Explosion Case Study



Hydrogen gas has an extremely broad explosive range. The photograph on the left was taken inside of a university laboratory in Missouri after a mixture of hydrogen and nitrogen exploded inside of an incubator. Although the explosion occurred in 2010 it still serves as a

timeless reminder of the explosive potential that hydrogen possess. I think we can all learn from this accident so Please click [here](#) to read about the details of this explosion as well as recommendations on how to prevent this type of explosion from happening again.

### A Fiery Tale: A Summary of a Pyrophoric Accident



The death of a graduate student at UCLA has opened the eyes of many about the hazards of working with pyrophoric or water reactive chemicals.

Please click [here](#) to read Amy Donofrio's account of a fiery laboratory accident involving the pyrophoric chemical n-Butyllithium, which also reacts violently with water. The story involves a student attempting to use a pyrophoric chemical for the first time in an organic synthesis lab as part of their undergraduate training. The student had no knowledge of the pyrophoric nature of the

## LABORATORY SAFETY RESOURCES

[Chemical Hygiene Plan](#)

[Laboratory Safety Handbook](#)

[Find an MSDS](#)

[Biosafety Manual](#)

[Online Hazardous Waste Manifest Form](#)

[Online Training](#)

[Daily Eyewash Inspection Checklist](#)

[EHS Homepage](#)

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compound, had not received any training on how to work with pyrophorics and was also working alone. In this true story you will find out that the combination of lack of training, lack of knowledge, failure to wear appropriate PPE and working alone creates a recipe for disaster.

## New Online Training



E Train is being rolled out this Fall and offers a centralized repository of online training, tutorials, and compliance-driven education and

awareness.

The goal for E Train is to keep comprehensive records regarding what training the employees have taken and when, enabling them to certify their training and empowering the university to maintain robust compliance records.

To access E Train, visit the OneStart portal [here](#).

The Office of Environmental Health and Safety has created an informative document that provides additional guidance on E Train which can be viewed [here](#).

Over the past year I have created the new online training modules below for the new E Train system

- Laboratory Safety Training
- Laser Safety Training
- Working Safely with Pyrophorics
- Hydrogen Safety Training
- Working Safely with Nanomaterials
- Laboratory Safety Refresher Training

Please visit Oncourse to take the training sessions above as well as many others.

## Common Laboratory Violations

Winston Baity joined the IUPUI Office of Environmental Health & Safety in October

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2008 as a Laboratory Safety Technician which requires him to serve as an inspector on

our chemical-lab safety team. Each year our team of Laboratory Safety Technicians surveys nearly 1200 labs using a checklist containing nearly two hundred items ([click here](#) to see the checklist).

In this article Winston discusses the top 5 violations he has found in laboratories. Please click [here](#) to read about these violations and then verify that none of these violations are present in your laboratory .

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**Please Check the Shelving Support Clips  
in your Chemical Storage Cabinets**

Do you recognize the object in the photograph to the right? This small object is a vital part of your chemical storage cabinet. Please click [here](#) to read about how

a collapsed shelf  
destroyed a university  
research building and  
find steps to prevent a  
similar incident from  
occurring in your  
laboratory.



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**"Don't Learn Laboratory Safety by Accident!"**