



101 Ways To Convince People That You Are Serious About Safety (And, That It Is Important)

When I started working for Dow Chemical Company, I was immediately struck by the difference in the attention paid to safety compared to my prior 25 years in school. The theme at Dow was "Life is fragile. Handle with care."

Over the years, my interest in the motivational factors of safety continued to grow. I was invited to talk to school teachers as UMass Lowell for National Chemistry Week.

I asked the host what she would like to speak about. She said, "How do you convince people to care about lab safety?" That became the title of the talk and a lifelong pursuit of the answer.

Years later, the classroom at the International Livestock Research Institute (ILRI) in Nairobi, Kenya was packed with 125 course participants. I asked the participants why they were there. I can still see one of them sitting on

a table in the back of the room. "I'm here, but how will I get my co-workers who are not here to pay more attention to lab safety?" he said.

All over the world, in 30 countries, 130 different types of labs, and more than 100,000 students, I keep hearing the same concern. "How can I convince my colleagues to care about this?"

At some point, probably for the talk at UMass Lowell, I began writing down the several different ways that I had heard about and that had occurred to me. I created a document with nearly 101 ways (see page six). It has been growing over the years, maybe you can suggest some that are missing. Contributions are welcome.

I'm going to make this a regular column in our *Speaking of Safety* Newsletter. I will provide the missing details and give examples where possible.

If you can't wait, give me a call or send an email. I will give you a sneak preview. So, let's begin with:

1. Give Rewards

This is critical. We spend way too much time telling our colleagues what's wrong, what is out of compliance? What needs to be cleaned up.

Call a timeout and say thank you to someone who is doing a good job. Praise and appreciation are consistently the number one listed factors in job satisfaction.

The last two issues of SOS featured LSI's new award with ACS DCHAS for academic research safety. The first will be presented at the Fall ACS meeting.

Download the Award Nomination Application Form Here:

[\[Click to Download LSI Grad Research Faculty Safety Nomination Form\]](#)

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Electronic subscriptions (three, 16-page issues) are free. Inquire about printed copy subscriptions. Multi-year and bulk subscriptions are also available.

You are welcome to reproduce all or part of the newsletter. Please share it with your students and colleagues. We appreciate hearing how these materials are used.

Some of the back issues are now available on line for free. We are working on adding more. Copies of all back issues (over 90) are available and can be purchased as a complete set in three-ring binders or electronically. Contact Connor Michael for more information.

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Volunteers

Would you like to help LSI? Become a volunteer!

LSI Updates

Dr. William Horace (Jack) Breazeale has been an LSI Adjunct Faculty Member and a member of LSI's Board of Directors for the past 35 years. He is stepping down as a Director (voting) to become Director Emeritus (advisor).

Gary Garber is volunteering to assist LSI with grant development. He has worked with Mass Tech to help get a Massachusetts Department of Industrial Accidents Safety Training Grant. We will be providing three one-day courses under the grant.

LSI Board member Lou DiBerardinis has taken on the role of Board Clerk. He is now a member of the Executive Committee.

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ISRAELI TECHNION PROFESSOR DIES OF INJURIES AFTER LABORATORY EXPLOSION

<https://www.haaretz.com/israel-news/.premium-israeli-technion-professor-dies-of-injuries-after-laboratory-explosion-1.8028768>



Prof. Emeritus Elazar Gutmanas, 80, died as a result of a laboratory explosion at the Technion – Israel Institute of Technology.

The explosion occurred during the course of Gutmanas' research with

hydrogen at his lab in the Department for Materials Science and Engineering, according to the fire department.

A senior Magen David Adom paramedic said at the time that Gutmanas was hospitalized with burns covering his body as well as other injuries to his upper body. He was taken to Rambam Hospital in Haifa in serious condition.

Gutmanas completed his Ph.D. in the USSR in 1970, before immigrating to Israel in 1974 and joining the Technion's Materials Science department a few months later.

His research topics included synthesis of composite materials, wear-resistant coatings on metal alloys, developing nanostructured bulk materials and developing load bearing biocompatible implantable devices, according to the Technion.

Editors Note: There are two major reasons why students get injured during teacher demonstrations: (1) there is no shield between the demonstration and the students, and (2) in the case of the use of alcohol, a small amount was not transferred into a small container and the rest left in the prep room.

WESTERN GUILFORD HIGH SCHOOL STUDENT INJURED DURING EXPLOSION IN CHEMISTRY CLASS HOME FROM HOSPITAL

<https://myfox8.com/2019/11/11/western-guilford-high-school-student-injured-during-explosion-in-chemistry-class-home-from-hospital/>



GREENSBORO, N.C. — The parents of a Western Guilford High School student who was injured during a classroom experiment say their daughter is being treated for burns at Brenner Children's Hospital.

Pete Green, the girl's father, sent WFMY News 2 a statement on Friday saying, "Aimee is not in great condition, we are currently at Brenner where her burns are being treated and cared for. At this time, we have no further comment."

Green's mom, Alicia Coverston Green has been updating family and friends via social media.

Coverston-Green wrote on her Facebook account that her daughter was admitted to the burn ICU Friday afternoon for fluid resuscitation, pain control and wound care.

A post on Wednesday evening gave more details about what happened to Aimee.

"Please pray for our beautiful daughter Aimee Green. She was in chemistry today, and the teacher was doing an experiment. It went badly and exploded. The explosion went right onto Aimee and caught her hair, face, chest, and arm on fire. She also has burns on both hands," wrote the mom.

Guilford County Schools confirmed a student at Western Guilford High School was injured Wednesday when a classroom experiment went wrong.



Safe Science — Be Protected
By Ken Roy
**CHEMICAL TOXICITY AND
HEALTH HAZARDS**

A safety incident happened at a high school in early September.

It seemed a chemistry teacher was in the chemical storeroom and noticed a bottle of barium oxide powder was cracked. The teacher started to move it to a rubber bottle carrier to contain it in case the crack should fail.

Unfortunately, the crack failed when the bottle was picked up—no injuries, but BaO powder went on the floor and a few shelves, making a huge mess. The teacher planned on covering it with kitty litter and sweeping it up and putting it into a container for hazardous waste pickup.”

The supervisor seeing the chemical powder on the floor told the teacher that it should not be touched and a hazmat pickup company was going to immediately be called. The company came the next day, after school dismissal, and the powder was cleaned up with a HEPA vacuum in 45 minutes. The manifest paperwork

was secured and all was back to normal—to the tune of several thousand dollars.

The administration questioned why an outside contractor had to come in and pick up the chemical powder spilled instead of the science teacher. The SDS said nitrile gloves, a gown, chemical splash goggles, and a mask were needed.

The TLV of BaO is 0.5 mg/m³. The supervisor was concerned and explained that the teacher cleaning it up would have within a few seconds exceeded TLV level. Plus, there was broken glass all over the floor, etc.

Remember that the threshold limit value (TLV) of a chemical substance is believed to be a level to which a worker can be exposed day after day for a working lifetime without adverse effects(1). TLVs issued by the ACGIH are the most widely accepted occupational exposure limits both in the United States and most other countries.

So bottom line, no injuries, the mess was cleaned up, the bill was paid. But it’s scary that the teacher figured, “oops, I made a mess, I’ll just clean it up.”

HEALTH HAZARDS vs. TOXICITY OF CHEMICALS

Laboratories basically have three types of hazards – biological, chemical and physical(3). Health effects for hazardous chemical exposure are often incomplete.

Two terms which are often used interchangeably for health effects are *toxicity* and *hazard*. However, these words are quite different. *Toxicity* is the ability of a chemical substance to cause harm. *Hazard* is the likelihood that a material will cause harm *under the conditions of use*(4). Thus, with proper handling, even highly toxic chemicals can be used safely. Conversely, less toxic chemicals can be extremely hazardous if handled improperly.

The actual chemical health risk is dependent on two factors - the toxicity and the actual exposure. No matter how toxic the material may be, there normally is little risk involved unless it enters the body. Assessing a chemical's toxicity and potential routes of entry can help determine protective measures that need to be taken. For additional information about toxicity and actual areas of entry in the body, check out "Chemical Safety - Hazard Communication" at <https://ehs.princeton.edu/book/export/html/60>.

WHERE TO GET THE TOXICITY INFO?

The first source for toxicity information is in the SDS for the chemical which has been spilled: Section 2 – Hazards Identification, Section 8 - Exposure Controls/PPE, and Section 11 – Toxicological Information.(%)

If that is not available, there are other internet sites which could be accessed for the toxicological information such as The National Center for Biotechnology Information or NCBI homepage at the U.S. National Library of Medicine (<https://pubchem.ncbi.nlm.nih.gov>). This is a great reference site to quickly find chemical information from authoritative sources.

IN THE END!

Bottom line is when there is a chemical spill, make sure teachers are trained to know what they are dealing with toxicity-wise BEFORE taking action to have it cleaned up!

Editor's Notes:

(1) TLV's come in three sizes, TWA, STEL, and Ceiling. TWA is an average exposure for a working day, STEL is a short term exposure limit for 15 minutes. Ceiling is instantaneous cap.

(2) In addition to training teachers to research toxicity, most employers are required to provide HAZWOPER Awareness Training to anyone who may encounter a hazardous chemical spill. See 29CFR1910.120.

This training enables teacher to more easily decide whether it is safe to clean up or to evacuated and get the HAZMAT team to respond.

(3) LSI believes that life (including lab) has nine different and important hazards: chemical, biological, physical, mechanical, radiation, noise, high/low pressure, electrical, and stress.

(4) LSI believes that hazard is inherent ability to cause harm and that risk is the likelihood that harm will occur due to exposure to the hazard. I should note that these are two commonly held uses of the word "hazard."

(5) Please read the SDS before you use the chemical. Be prepared in advance to take appropriate, immediate action. No excuses!

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More Editor's Notes!

1. Ken is a past member of LSI's Board of Directors.

2. If you've been enjoying Ken's series, "Safe Science—Be Protected", you'll be pleased to know that LSI has published a collection of articles in a single volume (100 pages, 2002, \$24.95 plus s/h). A second volume of Ken's articles is now available.

3. LSI has a wonderful publication for elementary school science safety entitled, *Safety Is Elementary: The New Standard for Safety in the Elementary Classroom*. (\$29.95 plus s/h). Ken is one of the co-editors along with Peter Markow and Jim Kaufman. Order online at www.LabSafety.org.

(LSI Updates - Continued from page 2)

LSI Operations Assistant Molly Carraway is expanding her responsibilities to include enrollment management. She is helping prospective students to identify and meet their lab safety needs.

LSI is getting greener. We are steadily reducing the use of paper documents. This newsletter, our course

notebooks, and 2020 catalog are now provided primarily in paperless formats. Printed copies of the notebooks are available at an additional cost.



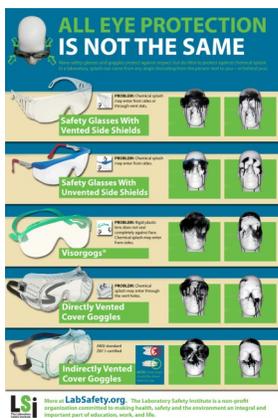
Several laboratory related magazines will soon be carrying LSI's lab safety columns as a regular feature.

101 Ways to Convince People That You Are Serious About Safety *(And, that it's important)*

1. Offer Rewards
 2. Make it a Condition of Employment
 3. Provide Repetition
 4. Create Participation
 5. Integrate with Curriculum, Work and Life
 6. Form a Committee
 7. Label Containers
 8. Plan for Emergencies
 9. Call OSHA
 10. Take it Personally
 11. Answer the Four Questions
 12. Be Responsible
 13. Have a Policy
 14. Establish Rules
 15. Write it Down
 16. Obey the Law
 17. Conduct New Employee Orientations
 18. Supervise
 19. Maintain
 20. Inspect/Correct
 21. Instruct/Train
 22. Document
 23. Report Accidents
 24. Investigate Accidents
 25. Build a Reference Library
 26. Be a Good Example
 27. Drive Home the Message
 28. Budget Money and Time
 29. Take Time to Clean-Up
 30. Yell-Get Emotional
 31. Appoint a Coordinator
 32. Interview/Hire Carefully
 33. Promote More Carefully
 34. Enforce the Rules
 35. Eat One Bite at a Time
 36. Have a Serious Accident
 37. Tell an Accident Story
 38. Keep Score in Public
 39. Set up a Bulletin Board
 40. Write a Newsletter
 41. Put Info with Paychecks
 42. Discuss at Department Meetings
 43. Show that You Care about Your Health and Safety
 44. Require Rules Agreements
 45. Conduct Emergency Drills
 46. Post Emergency Phone #'s
 47. Provide Safety Equipment
 48. Install Emergency Equipment
 49. Appoint a Hazardous Waste Coordinator
 50. Reveal an Unknown Hazard
 51. Use the Bump-into Strategy
 52. Job Descriptions
 53. Performance Review
 54. 1st Topic Every Meeting
 55. Solicit/Respond: Suggestions
 56. Stand Down!
 57. Report Near-Misses
 58. Letter of Responsibility
 59. Pay your CHO
 60. Report Unsafe Conditions
 61. Pad Lock the Door
 62. Ask Interview Question
 63. Use a Safety Maintenance Form
 64. Embrace the Six Leadership Principles
 65. Do It in Public
 66. Put It on the Agenda
 67. Make training interesting
 68. Endorse and Support the Rules
 69. Let's have Coffee
 70. Snap, Crackle, and Pop
 71. Harassment
 72. Be like Denny and Larry
 73. Live Free or Die
 74. Be a Windsock
 75. Run a 1st Aid, CPR, AED Class
 76. The Bathroom Mirror Sign
 77. MSDS of the Month
 78. Emergency Procedure of the Month
 79. Remember the Dog Sled
 80. Answer the Kenny Rogers Question
 81. Use the Dean Martin Chemical Management System
 82. Put it in the Ad
 83. Four-part NESO Form
 84. Take a Hike
 85. Everyone Inspects
 86. The King and I
 87. Celebrate New Words
 89. \$10,000 Offer
 90. Bowling in Trinidad
 91. Alcoa Safety (Paul O'Neill)
 92. ?
 93. ?
 94. ?
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- 101. *Invite me to talk to your employees, students, staff, faculty, and administrators. And, inspect your facilities, audit your safety program. Let me help you make your institution or organization a safer place to work and to learn.***

New Posters

LSI has created a new set of colorful safety posters that can be downloaded for free from our website. See <https://www.labsafety.org/product-category/posters>



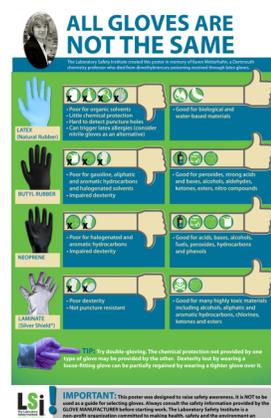
All Eye Protection Is Not the Same
 PDF: Free
 Printed 11" x 17":
\$11.50



Chemical Safety Reminders
 PDF: Free
 Printed 11" x 17":
\$12.00



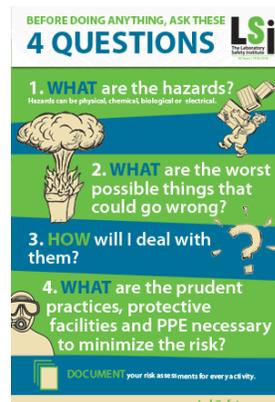
Rules For Chemical Fume Hoods
 PDF: Free
 Printed 11" x 17":
\$11.50



All Gloves Are Not the Same
 PDF: Free
 Printed 11" x 17":
\$12.00



Lab Safety Memorial Wall 6-Poster Set
 Six 11" x 17" Posters:
\$20.00



Four Questions
 PDF: Free
 Printed 11" x 17":
\$11.50

Laboratory Safety Guidelines

"Laboratory Safety Guidelines" was written while I worked for the Dow Chemical Company, in an attempt to share with schools, colleges and universities what I was learning about lab safety. In 1976, Dow sent copies to 2,000 college and university chemistry departments and received requests for 250,000 reprints!

Since then, Dow (1986), Fisher Science Education (1989), Carolina Biological Supply Company (1994), Fisher Safety (2012), Workrite (2017), SCAT-Europe (2019) have produced co-branded editions of the Guidelines in various poster formats.

The Guidelines have been translated into 21 languages. In all, over six million free copies have been distributed and reprinted in various forms. The most recent new language is Braille. Our thanks to the Perkins School for the Blind for completing this translation.

In each issue of *Speaking of Safety*, we will publish one or two of the revised and expanded guidelines. The entire collection of revised and expanded guidelines is available in a 50-page booklet for \$8.95.

#1. HAVE A WRITTEN SAFETY POLICY



This is the cornerstone of a good safety program. It's a statement endorsed and supported by the administration that speaks to the fundamental responsibilities for health and safety in the academic institution or company.

For example: "It is the responsibility of our (name of company or institution) and its employees to insure that our business activities (or educational programs and other activities) protect and promote the health and safety of our customers (students), our employees, and the environment."

Your department may want to draft a sample policy statement for recommendation to your administration or board of education. It is virtually impossible to have an excellent safety program without their support. Your written safety policy will provide the foundation of your safety program.

Policy statements of this type need to be signed by the highest ranking official of the organization, dated,

laminated, and mounted in the entrance of every building.

When I was EH&S coordinator at Curry College, I got our president to sign a policy statement not unlike the one above. I made up seven framed copies. I took them with a hammer and nails to the offices of the president and his direct reports. I asked them where they wanted the college's new EH&S policy statement (not if ... where). I hung them prominently so both the senior administrator and his/her visitors could see it every day.

At BASELL (BASF/Shell joint venture; now Lyondell), the signed, dated, and framed policy statement was displayed prominently in the lab. It had a large white matt inside the frame where all the lab workers could sign their name to make their clear commitment to the policy (GREAT IDEA).

What is your company's or academic institution's safety policy statement? Please send us a copy to share with our readers. Would you like to receive a 16-page booklet containing a collection of 19 safety policy statements? Copies are available for \$10.00 from LSI (see order form in back of booklet).

Copies of the above policy statement (appropriate for your company/institution) are available from LSI for \$1.00. See order form in back of booklet.

#2. ORGANIZE A SAFETY COMMITTEE



Your department should have a safety committee. Academic institutions and companies should all have safety committees. The committees should

consist of employees, supervisors, faculty, staff, administration, and students.

Membership in the committee should rotate so that all lab employees participate over a period of five to ten years. Each member has an alternate who attends the monthly meeting when the member is not available. After a term of one year, an alternate takes over and a new alternate is appointed. Stagger the terms so that

(continued on page 10)

Volunteer Internet Marketing and Operations Assistants

LSI is looking for volunteers to assist with both Internet marketing and operations activities. Internet marketing volunteers help by identifying the names and addresses of potential email recipients and by sending email announcements. Volunteer operations assistants help produce the materials that LSI uses at its training programs. This work is performed in our Natick office.

If you have one to four hours per week available, please contact Jim@LabSafety.org or call 508-647-1900.

Subscribers/Members

We need your help. Please consider increasing your support for LSI. If you are currently a subscriber, think about becoming a member. If you are a member, consider renewing early or becoming an organizational member. Donations made by "Friends" are tax deductible. In-Kind gifts of equipment, supplies, and services are also appreciated. To learn more about how you can help, contact Jim Kaufman at Jim@LabSafety.org.

LSI Seeks Corporate Sponsors

The Laboratory Safety Institute is seeking corporate sponsors. Assistance is needed to provide EH&S program development services to schools, colleges, and universities; and to fund scholarships for school science teachers. LSI also offers program reviews, facilities inspections, teacher professional development, and administrator awareness seminars with the help of corporate sponsors.

LSI needs your help in identifying Corporate Public Affairs and Community Affairs departments. Please call or email LSI to suggest a potential local corporate sponsor.

LSI Partners Network

Join the LSI Partners Network. Host an LSI course in your area. Volunteer to work with the Institute to offer one of our seminars or short courses for your colleagues and for others in the area.

LSI Partners help with the scheduling of facilities, audio-visual equipment, refreshments, and advertising. Contact Ana Adams (Ana@LabSafety.org), Operations Manager, for more information. See the sample seminar and short course schedules at LSI's website (www.LabSafety.org).

ICASE Update News from the International Council for Associations of Science Education



ICASE will hold its next triennial world conference in 2022. For more information, visit the ICASE web site, www.icaseonline.net.

LSI is organizing a symposium on safety in science education and will offer a professional development course on safety in science education. We are looking for sponsors to make it free for science/STEM teachers.

Science educators from schools and higher education, lab technicians, lab managers, and scientists will be making

presentations and discussing laboratory safety issues.

The ICASE committee on safety in science education is being reorganized to have one representative from each ICASE region.

For more information about the ICASE-LSI symposium at the India conference or to express interest in contributing a paper please email me, jim@labsafety.org.

Bob Worley from Great Britain resigned as chair of the ICASE Standing Committee on Science Safety. Anyone interested?

Candidates are now being sought for the position of President Elect.

To become a member of ICASE: <http://icaseonline.net/membership.html>

Lab Safety Guidelines (continued from page 8)
no more than one member is replaced every month or two.

The committees should meet regularly to discuss safety, health and environmental concerns/problems and to seek solutions to them. The committee should help to see that the safety policy is implemented.

The committee can help to promote an interest and concern for health and safety issues. They might be the group responsible for conducting regular inspections, reviewing accident reports, and developing recommended safety procedures. Better is to be a coordinating group that engages all the other employees in the organization in these activities.

One type of safety committee is called the central safety committee. It is chaired by the highest ranking onsite official. The members of the committee are his or her direct reports. In this way senior management/administration is involved and providing leadership in the safety program.

The central safety committee is the way they do it at DuPont. For more good ideas from DuPont, read *Excellence in Safety Leadership* by James Thomen. It's available from LSI.

How often does your committee meet? Once a year? Quarterly? Every other month? Monthly? More is more! What responsibilities does your safety committee have? How well does the committee work? What problems do you have? Let us know!

We invoke the risks of the things we don't want to do, and ignore the risks of the things we want to do

Geraldine V. Cox, Ph.D.
Former Vice-President and Technical Director
Chemical Manufacturers Association

Lesson Learned - Peroxide Explosion Injures Campus Researcher

Hazardous peroxide contaminants formed in old solvent and exploded after concentration.

What happened?

An undergraduate student researcher was working at the laboratory bench when the apparatus she was using exploded, sending glass fragments into her face and upper torso. The researcher was using a rotary evaporator (rotovap) to remove organic solvents from an azobenzene precipitate.

She adjusted the bottom flask which then exploded, sending glass towards her face, hitting her safety goggles and forehead. Lab personnel helped her to the safety shower and called 911.

She was taken by ambulance to the hospital where she received stitches above her eyes and other treatment for her injuries. She was released from the hospital the same day.

What was the cause of the explosion?

Most likely, the explosion was caused by peroxide contaminants in the solvents that had concentrated to the point of being unstable. Both tetrahydrofuran (THF) and diethyl ether were used in the reaction, and both of these solvents form peroxides over time.

In this case, the THF used did not contain a stabilizer (such as BHT) to slow the rate of peroxide formation and the four-liter bottle was nearly empty. A sample from the THF bottle was later analyzed with a simple test and found to contain excessive peroxides (more than 100 mg/l).

The evaporation in the rotovap concentrated the peroxides in the bottom of the glass reaction vessel and any movement of the vessel could cause the now dry and shock sensitive peroxides crystals to explode. Below is a photo of what remained after the explosion. Note that the lower round-bottomed flask from the rotovap exploded inside the metal water bath.

Note: This incident occurred at the UC Berkeley. The complete description and what corrective actions were taken are available on their EH&S website.

These questions, answers, and comments are taken from the Laboratory Safety Institute's mail, email, phone calls, and Internet discussion list.

There was a recent discussion about cryogenic liquids ...

Vito Vascassenno wrote ...

I am developing some training on cryogen liquid/gas safety and I have not had much exposure to this subject. I was wondering if anyone would have any guidance on training that other institutions have developed.

Any help would be greatly appreciated.

Jay Bensch replied ...

Jefferson Lab has about ten 5 liters each of both LN₂ and LHe so our safety manual covers ODH and cryogenic safety.

<https://www.jlab.org/eshq/ehsmanual>

JK Replied

Take a look at the Air Products Safetygrams on cryogenic liquids. Air Products has an excellent collection of documents about a wide range of gases and gas handling equipment,

By the way, LSI provides training (live onsite, webinars, and on-demand) on safety with cryogenics.

PS. Do you recall the cryogenic liquid nitrogen incident at Texas A&M? The large metal tank launched through the third floor ceiling in the chemistry department doing extensive property damage.

I've spent the last two week lecturing and visiting labs in Thailand. LSI works each fall with a lab design and equipment manufacturer, NEOLAB International. We usually do it to coincide with Thailand Lab. It's a Expo held in Bangkok September at their international expo center, BITEC.

The past several years, one of the companies which has had us visit their labs and provide courses in PTTGC (Global Chemical). They are a petroleum company with gas stations and more throughout the country.

This year, I noticed something excellent in their labs. Each lab bench had a 4x4 sticker with a QR code. Above the code were the words ... Safety Data Sheets.

If you scan the code, it takes you to the collection of SDSs for that lab. What a cool idea! ... Do it.

Recently, a school district science supervisor emailed to ask how many fire blankets to have in the lab. The question peaked my curiosity as to why this question had come up.

Having a fire blanket in the lab is a good idea. There are several useful applications:

1. Throw it over something or someone on fire to help put out the fire. It's not a good idea to try wrapping yourself in it if you were on fire. This can trap the heat making the burns worse and create a chimney effect bringing toxic gases to your lungs.
2. Keep someone warm.
3. Create a modesty curtain for the safety shower.
4. Serve as a wrap after the shower.
5. Use it as a temporary stretcher to remove someone from the lab.
6. Act as a pillow for someone on the floor.
7. Take on a picnic (kidding).

Paula Borstel wrote:

My AP has asked to use my chem/anatomy room for student intervention from lunch through 6th, since I only have science classes 1 to 4. Although I would be happy to share with a science teacher, the thought of a non science teacher in my room with students is scary. I am not sure how I can possibly have everything clear and put away in 5 minutes. Can anyone direct me to NSTA, OSHA, etc. that relate to this issue?

Ken Roy replied: A similar question was asked on the NSTA Safety Blog (<http://blog.nsta.org/2016/06/13/welcome-to-the-nsta-safety-blog/>) recently.

JK Replied: My feeling is that this is a bad idea. You run the serious risk of chemical and biological contamination. I would not recommend this practice. 29CFR1910.141.g.2/4 says no food or beverage

(Continued on Page 14)

STUDENT CAUGHT FIRE DURING CHEMISTRY TEACHER'S BOTCHED "BURNING MONEY" DEMO

https://www.kmov.com/student-caught-fire-during-chemistry-teacher-s-botched-lab-experiment/article_9161f508-7519-56c8-8506-602aa7c893f2.html



ATLANTA (AP) — A Georgia high school teacher presenting a flashy demonstration to get her students excited about chemistry made a mistake that caused a fire to burn "out of control" and seriously injure a teenager in the front row, a school district report released Wednesday says.

Malachi McFadden, 16, suffered third-degree burns on his face, neck and torso and was hospitalized after his chemistry teacher bungled the "burning money demonstration" at Redan High School, just outside Atlanta, on the second day of his junior year, his lawyers said. On Wednesday, they released a report by

an investigator for the DeKalb County school system that uses witness statements from students and teachers to piece together what happened August 6th.

Teacher Bridgette Blowe wrote in a statement included in the report that she's successfully done the demonstration — lighting an accelerant-soaked bill on fire — in previous years and for two other classes this year. In this particular class, the flame didn't burn out completely, Blowe wrote, "so I attempted to extinguish the flame with water, but I reached for the alcohol instead, by mistake."

A post on Wednesday evening gave more details about what happened to Aimee.

"Please pray for our beautiful daughter Aimee Green. She was in chemistry today, and the teacher was doing an experiment. It went badly and exploded. The explosion went right onto Aimee and caught her hair, face, chest, and arm on fire. She also has burns on both hands," wrote the mom.

Guilford County Schools confirmed a student at Western Guilford High School was injured Wednesday when a classroom experiment went wrong.

Editors Note: There are two major reasons why students get injured during teacher demonstrations: (1) there is no shield between the demonstration and the students, and (2) in the case of the use of alcohol, a small amount was not transferred into a small container and the rest left in the prep room.

2020 Webinars

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How to Convince Others: Jul 17
Lab Ventilation & Fume Hoods: Nov 20
Leadership in Safety: Mar 13
Legal Aspects of Safety: Feb 14

All webinars and courses are available on request. Please contact Mary Thompson more information: mthompson@labsafetyinstitute.org.

LSI provides **free** webinars "Creating a More Effective Lab Safety Program" or "Safer Science Demos" for K-12 science teachers thru their state science department of education or state science teacher

association. Please contact your local association and ask them to request these free science teacher webinars!

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This year, LSI is offering the opportunity to find out everything you wanted to know about lab safety but were afraid to ask. Question and answer sessions every month are live on the Web, and most are available in-person in our classroom in Natick as well.

If you come to our classroom, beverages and snacks will be provided. On the Web, sorry it's BYO. ;-)

Space is limited to the first 100 on the Web and first 20 in our Natick office. Sessions held from 10:00 to 12:00 a.m. EST. Registration fee is only \$10.

For more information, call Ana Adams, 508-647-1900, email ana@labsafety.org, or register online at www.labsafety.org.

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Shared Classrooms/Labs (continued from page 11)

storage or consumption in area that may be exposed to hazardous chemicals.

Nora Dunkel wrote: Where exactly does one access RTECS?

JK Replied: Here's the link to the NIOSH RTECS access information: <https://www.cdc.gov/niosh/rtecs/rtecsaccess.html>

It is available in several places and ways. The Canadian Center for Occupational Safety and Health is one of the vendors selling online subscriptions.

Lab Safety for Researchers Webinar

The webinar that CHAS co-sponsored is now available for open access free viewing at

https://www.acs.org/content/acs/en/acs-webinars/professional-development/researcher-safety.html?sc=190815_webinar_prodev_em_eb_chas

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See page 12 for more information