Thank you for joining us this evening.

If you would like to help support Chem Club T-shirts are sold after the demos or anytime in the Chemistry Department’s main office.

The Chem Club also has a Relay for Life team which could use donations. For more information go to http://www.chembio.niu.edu/chembio/chem_club

Thank you to the Department of Chemistry and Biochemistry.

Thank you to the Faculty and staff that helped the Chem Club with these demos.

CHEM DEMO NIGHT GOES HOLLYWOOD

18APRIL2012
**DEMOS**

1. Glowing Paint
2. Flamable Movie Curtain
3. Underwater Fire
4. Rainbow Flames
5. Space Marshmallow
6. Burning Money
7. Warm Snow
8. Bubbling Cauldron
9. Super Strength
10. Cold Fire
11. Flameless Smoke
12. Thick Water
13. Chemical Garden
14. Flaming Tomato
15. Making Soap
16. Fireworks Ignited with Ice
17. Playing with Liquid Nitrogen
18. Exploding Plaster of Paris

**EDUCATIONAL STUFF**

### Chemical Garden

The water glass solution reacts with the metal ions to form a semipermeable membrane consisting of an almost insoluble precipitate of metal salts. 
http://chemistry.about.com/od/growingcrystals/a/aa060704a.htm

### Fireworks Ignited with Ice

“Water is typically thought of for putting out the fire, but in this spark-filled redox reaction (zinc and ammonium nitrate, accelerated by ammonium chloride) it actually initiates it. Barium nitrate is responsible for the green flame seen in this pyrotechnic display”
http://orgchem.iisc.ernet.in/misc/magic3.pdf

### Exploding Plaster of Paris

Iron oxide and aluminum metal react spectacularly to form iron metal and aluminum oxide. Starting the reaction requires lots of heat, so it is lit with hot burning strip of magnesium. The explosive reaction can be controlled by blending the iron-aluminum mixture in plaster of Paris.

### Rainbow Flames

Every element, when heated gives off light of that element's characteristic colors. To make that happen, we put these elements in a flame and they beautifully present their colors. Examples: lithium is crimson red, sodium is bright yellow, copper is green.

### Playing with Liquid Nitrogen

Due to its properties, liquid nitrogen instantly freezes any object that is immersed into it. Liquid nitrogen can also create great thick clouds and deflate balloons.
http://en.wikipedia.org/wiki/Liquid_nitrogen or

### Space Marshmallow

A marshmallow, a balloon, and shaving cream all expand in a vacuum environment, can a person, like in the movies, expand to the point of explosion in a vacuum atmosphere?
http://www.geoffirelandis.com/vacuum.html

### Chemical Garden

Dry ice is frozen carbon dioxide, which at room temperature under goes a process called sublimation. Sublimation is the transitions from a solid into a gas without first melting into a liquid. That fast transformation is what makes experimenting with dry ice so much fun!
www.weirdsciencekids.com/dryice

### Warm Snow

How can you make movie snow that won't freeze your stars? And how does this apply to clothing babies?
http://en.wikipedia.org/wiki/Sodium_polyacrylate

### Thick Water

How can you use the cell walls that make wood rigid to simulate the ghost slime in *Ghostbusters*, the lava in *Star Wars*, or the cream in ice cream?
http://en.wikipedia.org/wiki/Methylcellulose

### Glowing Paint

What do scary monsters and emergency exit signs have in common?
http://en.wikipedia.org/wiki/Strontium_aluminate

### Flameless Smoke

Potassium nitrate vigorously reacts with sugar. Many such combustion reactions go to completeness to produce virtually invisible water vapor and carbon dioxide. However, this reaction is incomplete and leaves "soot" (carbon-based particulates) behind. This soot makes a nice smoky mixture for your viewing pleasure.