



JANUARY 2012

THE CHEMIE NEWSLETTER



**CHEMICAL ENGINEERING
ASSOCIATION**

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Were you right? Check here.

CHE-MANIA!!!

Believe it or not, some chemical engineers do have a sense of humour and this section is a testament to that. Here are some of the most popular internet jokes on chemical engineering!

Chemical Engineer vs. Chemist

A. Chemical engineer is a person who does for profit what a chemist does for fun.

What is the difference between the two?

A. Oh, it's just Rs. 30 k a year and a job.

What do you call it when a whole bunch of chemical engineers change school?

A. Mass Transfer.

How can you tell if your child is going to be a chemical engineer?

A. Your child has torn apart his teddy bear and is studying the chemical composition of the filling.

Rules of chemical engineering labs:

- When you don't know what you're doing, do it neatly.
- Experiments must be reproduceable; they should fail the same way each time.
- Experience is directly proportional to equipment ruined.
- In case of doubt, make it sound convincing.
- Do not believe in miracles---rely on them.
- Team work is essential. It allows you to blame someone else.
- All unmarked beakers contain fast-acting, extremely toxic poisons.
- Any delicate and expensive piece of glassware will break before any use can be made of it. (Law of Spontaneous Fission)

Chemical Constant: *Matter will be damaged in direct proportion to its value*

Chemical Law: *If anything can go wrong, it will.*

Chemical Corollary: *Left to themselves, things tend to go from bad to worse.*

Chemical Revised Law: *Everything goes wrong all at once.*

You might be a chemical engineer if....

- You have a favourite pump manufacturer.
- You can remember 7 computer passwords but not your anniversary.
- You've ever considered installing a scrubber on your chimney.
- You explain surface tension to a 10 year old when he asks why you are adding oil to boiling spaghetti.
- You have a psychometric chart hanging above your mantel.

- Your work clothes are almost as old as you are... and so is your car.
- You can size distillation columns in your head, but still think that spending \$45 for dinner is exorbitant.
- You once burned down the gymnasium with your Science Fair project.
- You try to explain entropy to strangers at your table during casual dinner conversation.
- You've used coat hangers and duct tape for something other than hanging coats and taping ducts.
- And you KNOW you are a chemical engineer if you've actually read this whole damn message beginning to end!!!!

*Compiled by,
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[source: www.engineeringhumor.com, www.nbc-links.com]

NEWS ON THE RACK:

The Miracle Oil:

Whatsoever the problem we face- body ache, skin allergies, rashes, wounds, dandruff troubles (the never ending list goes on and on), the most common advice given by elders is “Use coconut oil”. Ever wondered why?...It is due to the presence of an astounding ingredient- Lauric acid. Lauric acid, (a 12 carbon chain fatty acid) is a powdery white solid with a faint odour of bay oil or soap. Coconut oil contains 42-57% of lauric acid. Experimentation of this acid by pharmacologists has suggested that lauric acid would present itself as a possible cure to kill one of the most dreaded viruses- HIV. This acid is currently in use for the treatment herpes, measles, influenza and hepatitis C.

Nano particles help reveal hidden finger prints:

Criminal investigations may benefit from new forensic methods based on nano particles. A technique using gold nanoparticles in combination with antibodies has shown promising results in enhancing fingerprints that are over a week old. The research was initiated with two basic ideas- 1) amino acids are present ubiquitously in sweat and thus most finger prints. 2) On rigid structures like nanoparticles, antibodies would distribute better due to larger surface area. With these points in mind, scientists linked amino acid binding groups to gold nano particles and applied them on finger prints. This resulted in clearer images of finger prints thereby enhancing the processing of images in forensics.

Battery turns entropy to electricity:

When fresh water river flows into the sea, the concentration difference leads to a change in entropy. US researchers have developed batteries that generate power from this entropy difference. The battery extracts energy through sodium and chlorine ions' movements in and out of the crystal lattice of the electrodes. (silver and manganese-di-oxide are used as electrodes). The battery discharges in seawater as chlorine is taken up by the silver electrode and sodium is taken up by the manganese dioxide electrode. The ions are released when the battery charges in freshwater.

Freezing supercooled water puzzles scientists:

As every school going child knows, water freezes at 0°C . Or perhaps not!! Researchers in Israel have discovered that super-cooled water itself freezes at different temperatures depending on whether it is in contact with a positive or negatively charged surface. The most commonly quoted hypothesis for this effect is that – Electric field affects the orientation of water molecules as the latter are polar. But the actual reason is still in question and continues to puzzle scientists.

*Compiled by,
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[Source: www.rsc.org/chemistryworld/news]

DID YOU KNOW...

Know more about the companies that visit our campus!!

#PepsiCo

PepsiCo is the world's second-largest food and beverage business and the global snack leader. It has 19 mega brands that each generate over \$1 billion in annual retail sales, including Gatorade, Tropicana, Pepsi Max, Mountain Dew, Sierra Mist, Aquafina, Mirinda, Quaker, Lay's, Walkers, Tostitos and Fritos. The company headquartered at New York, operates nearly 700 manufacturing facilities worldwide. PepsiCo was named among Fortune's World's Most Admired Companies in 2011, for the third consecutive year.

#Coromandel International

Coromandel International is an Indian corporation founded in the early 1960s by IMC and Chevron Companies of USA. Originally named Coromandel Fertilisers, the company is in the business of fertilizers, pesticides and specialty nutrients. The company is also in rural retail business in the state of Andhra Pradesh through its Mana Gromor Centres. Coromandel International is a subsidiary of both the Murugappa Group and EID Parry, which holds 62.82% of the equity in the company. Coromandel International was ranked #16 on Business Today's 2009 list of the Best Companies to work for in India.

#IOCL

IndianOil, is India's largest commercial enterprise and is the highest ranked Indian company in the Fortune 'Global 500' listing, 98th position in 2011. It is also the 18th largest petroleum company in the world and the No. 1 petroleum trading company among the National Oil Companies in the Asia-Pacific region. IOCL was featured on the 2011 Forbes Global 2000 at position 243. It is fifth most valued brand in India according to an annual survey conducted by Brand Finance and The Economic Times in 2010.

#3M

3M, formerly known as the Minnesota Mining and Manufacturing Company, is an American multinational conglomerate corporation based in Maplewood, Minnesota, United States. With over 80,000 employees, they produce more than 55,000 products, including: adhesives, abrasives, laminates, passive fire protection, dental products, electronic materials, medical products, car care products, home products (Heard of Scotch-Brite??!!). Did you know that the U.S. astronaut Neil Armstrong walked on the moon wearing space boots with soles made of synthetic material from 3M. Michael Johnson won a gold medal in the 2000 Olympics 400-meter sprint wearing shoes made from 24-carat gold Scotchlite brand reflective fabric developed by 3M.

#L&T

Larsen & Toubro Limited or better known as L&T, is an Indian multinational conglomerate headquartered in Mumbai, India. The company has business interests in engineering, construction, manufacturing, information technology and financial services. Considered to be the "bellwether of India's engineering sector", L&T was recognized as the Company of the Year in 2010. L&T has featured four times in Forbes Fab 50 list of the best public companies in the Asia-Pacific region

#BOC

The BOC Group plc was the official name of the multinational industrial gas and British based company more commonly known as BOC, and now a part of The Linde Group. In September 2004, BOC had over 30,000 employees on six continents, with sales of over £4.6 billion. The BOC manufactures a wide range of chemicals providing services for numerous industries like the food and beverages to Iron and Steel Manufacturing.

#RIL

Some Facts about India's leading Corporate Family – The Ambanis'!

- * Revenues (\$27 billion) equivalent to 2.9% of India's GDP.
- * Revenues 12% of India's total exports.
- * India's largest company is the 269th largest company in the world, up 73 places since 2010.

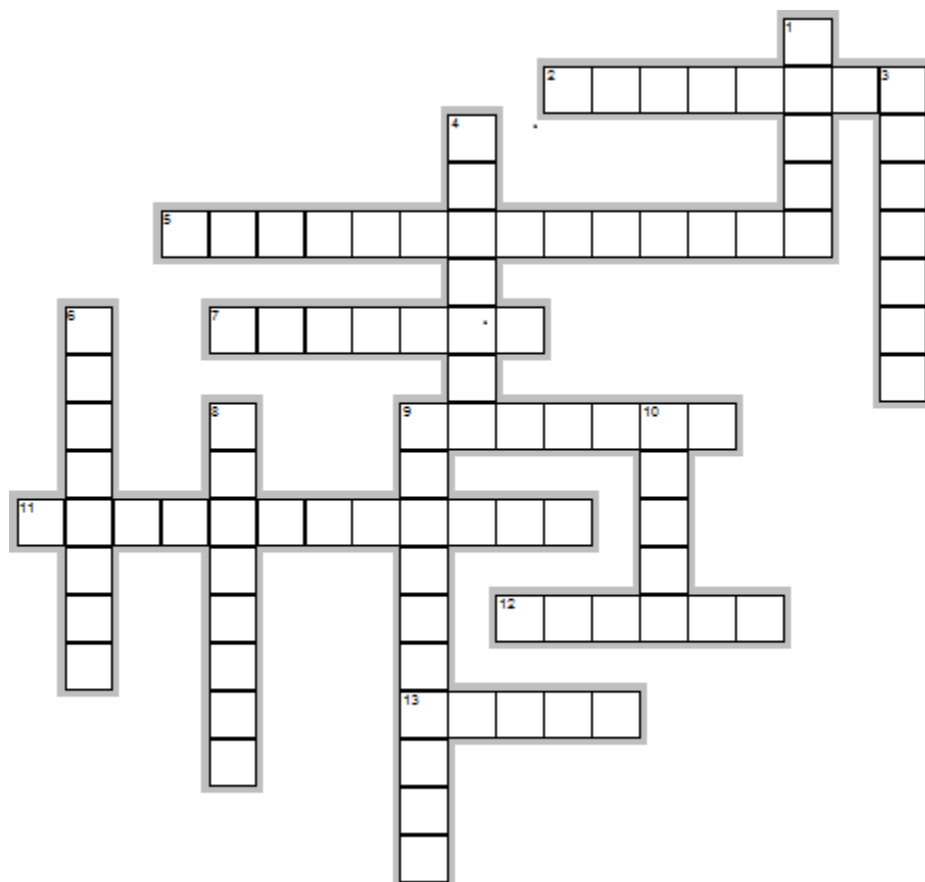
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Source : www.wikipedia.org , <http://www.ril.com/>, www.3m.com

CROSSWORD-2



Edupoint.com

Across

2. Which of the analogies gives $St = f / 2$?
5. method of calculation of number of theoretical plates of a distillation column is based on both material and enthalpy balances
7. The..... diffusivity is dependent on the molecular velocity and pore radius of the catalyst
9. During evaporative cooling process with recirculated water, which will remain constant?
11. solubility x diffusivity
12.equation is used to calculate number of plates in a distillation column at total reflux
13. Heat in BTU necessary to increase the temperature of 1 lb of gas and its accompanying vapor by 10F is called heat

Down

1. At the point selectivity is 1
3. Corresponding to Prandtl number in heat transfer, the dimensionless group in mass transfer is number

4. For azeotropic separation of ethanol-water mixture, the entrainer that is used is
6.equation applies to differential distillation
8. Corresponding to Nusselt number in heat transfer, the dimensionless group in mass transfer is..... number
9. Diffusivity of liquids can be estimated by equation
10.number, is given by Sc / Pr

Solutions for Crossword-1 [December Edition]

