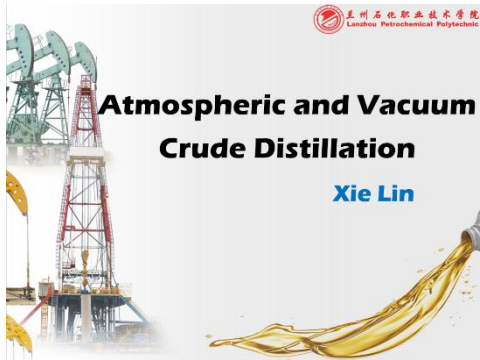
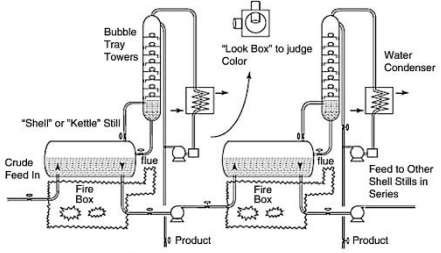







(四) 课件

表 4. 部分多媒体课件节选

燃料油生产技术	
 <p><b>Atmospheric and Vacuum Crude Distillation</b> Xie Lin</p>	<p>The production of early distillates was made by cascading the crude oil through successive stills, each operating at successively higher temperatures.</p>  <p>Early continuous pipestill schematic</p>
<p><b>Introduction of crude oil distillation</b></p> <ul style="list-style-type: none"> <li>Distillation is the separation of crude oil in atmospheric and vacuum distillation columns into groups of hydrocarbon compounds based on molecular size and boiling-point ranges.</li> </ul> 	<p><b>Desalting crude oil</b></p> <p>Existence form of salt</p> <ul style="list-style-type: none"> <li>dissolved</li> <li>suspended salt crystals</li> </ul> 
身边的化学	
<p><b>The guarantee of baby's quite sleep</b> —— The secret of Diapers</p> <p>College of Petrochemical Engineering <b>Xinjie Zhang</b></p>	
<p><b>① The development of diaper</b></p>   <p>Improved style, gradually applied to life, widely used</p> <p>Children, the elderly, including pets, have corresponding diapers or tablet products</p>  <p>In the 1980s, Tang Xinyuan, a Chinese, improved his spacesuit and invented a kind of super absorbent diaper</p>  <p>The three astronauts also used special diapers</p> <p>尿不湿</p>	
<p>1.Where does formaldehyde in life come from? 生活中的甲醛来自哪里</p>	

## 危险化学品安全



兰州石化职业技术学院

### Safety of Hazardous Chemicals

Explainer: Linsheng Jiao; Xingguang Wang

College of Petroleum Chemical Engineering

#### 1. Introduction

Lanzhou Petrochemical Polytechnic

##### 1.1 Introduction to the course

##### I. Political Education



##### What is the Chinese Dream?

The core goal of the "Chinese Dream" can also be summarized as the goal of "two hundred years", that is, by the 20th anniversary of the founding of the Communist Party of China in 2021 and the 100th anniversary of the founding of the People's Republic of China in 2049, the Chinese nation will gradually and eventually be realized Great revival.

The concrete manifestations are the prosperity of the country, the rejuvenation of the nation, and the happiness of the people.

The way to achieve this is to follow the path of socialism with Chinese characteristics, adhere to the theoretical system of socialism with Chinese characteristics, carry forward the national spirit, and consolidate Chinese power.

The means of implementation is the five-in-one construction of politics, economy, culture, society and ecological civilization.

## 无机化学



### Inorganic chemistry

Teacher: Xiayajun

#### Chapter 1 General knowledge

##### \* History of inorganic chemistry

##### Early stage:

1<sup>st</sup> AD: Alchemists were active in China, Egypt, and other centers of civilization early;

1150 AD: Gunpowder was used in Chinese fireworks;  
17<sup>th</sup> century: the common strong acids ( nitric, sulfuric, and hydrochloric) were known, and more systematic descriptions of common salts;

#### Chapter 1 General knowledge

##### \* Review of basic chemistry

Group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Period	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	H	He																
2	Li	Be	B	C	N	O	F	Ne										
3	Na	Mg	Al	Si	P	S	Cl	Ar										
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Uub	Uut	Uuq	Uup	Uuh	Uus	Uuo

\*Lanthanoids

\*\*Actinoids

#### Chapter 1 General knowledge

##### \* Review of basic chemistry

##### Some common chemical parameters

##### (2) the amount of substance

It is often convenient to use the mole to describe the amount of substance which represents for n and in unit of mole.

$$n = \frac{N}{N_A}$$

N is the number of molecules,  $N_A$  is Avogadro constant, which is the number of molecules per mole. the value of  $N_A$  is  $6.02 \times 10^{23} \text{ mol}^{-1}$ .

## 物理化学



### Physical Chemistry

#### Chapter 1 Introduction

Anqi Wang & Xinjie Zhang

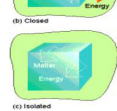
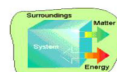
#### 0. Basic concepts

##### Systems

(a) **An open system:** can exchange matter and energy with its surroundings.

(b) **A closed system:** can exchange energy with its surroundings, but it cannot exchange matter.

(c) **An isolated system:** can exchange neither energy nor matter with its surroundings.



# Organic Chemistry

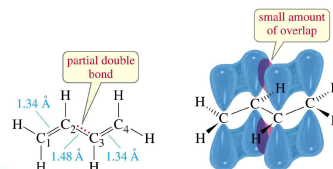
## Chapter 4 Conjugated Systems and Orbital Symmetry

HONG TIAN  
Lanzhou Petrochemical Polytechnic  
December, 2018



### Structure of 1,3-Butadiene

- Most stable conformation is planar.
- Single bond is shorter than 1.54 Å.
- Electrons are delocalized over molecule.



5

# ORGANIC CHEMISTRY

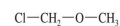
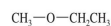
## Chapter 9 Ethers, Epoxides

Man LiLi

### 9-1-2 IUPAC Names

IUPAC names use the more complex alkyl group as the root name, and the rest of the ether as an alkoxy group.

Examples:



IUPAC name: methoxyethane

methoxybenzene

chloromethoxymethane

common name: ethyl methyl ether

methyl phenyl ether,

chloromethyl methyl ether

or anisole