

# 科技 英语

# 阅读

Readings in Scientific  
English

舒力 吴伟 编

山东科

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山东科学技术出版社

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## 前 言

《科技英语阅读》(Readings in Scientific English)是根据大学英语教学大纲的要求,为理工科大学三年级学生编写的科技英语阅读教材,也适用于广大科技人员提高专业英语阅读能力。

本教材旨在帮助大学理工专业高年级学生以及科技人员完成从基础英语向专业英语的过渡。这个过渡阶段的任务是:

(1) 通过阅读本教材所提供的语言材料,熟悉科技语体的语言特点,进一步提高阅读能力。

(2) 掌握科技语体常用词 1000 个左右,固定词组约 100 个,以及该语体常用的语法结构。

(3) 介绍科技英语翻译知识,锻炼翻译能力。

(4) 训练科技英语听说能力。

全书共 16 个教学单元。按每学期 36 个学时设计,学完整套教材需要两个学期,72 个课内学时。

每个单元由主课文、翻译知识、补充课文三部分构成并配有练习。课文内容不局限于某一专业,但和任何理工专业都密切相关,体现各专业的共性。文章选自现代英美书刊,基本上未经改动。补充课文供学生课下泛读。选入本教程的绝大部分新词语属于科技语体通用词、半技术词(subtechnical words)和科技英语结构词。为了增加阅读量,另附 10 篇文章并配有汉语译文以供参考。

本教程采用 4 种练习形式:

(1) 构词法练习:选出科技英语常用的能产型词缀,编成练

习，帮助学生扩大词汇量，提高猜测词义的能力。

(2) 多项选择：检查学生是否掌握了文章所传达的信息。

(3) 简短问答练习：检查学生对文章的理解，训练科技英语听说能力。

(4) 翻译练习：翻译知识一共 14 讲，每一讲都配有练习，训练科技英语英译汉能力。

上述 4 项练习紧扣课文，步步深入，构成一个覆盖整篇课文、理解表达兼顾的练习体系。

在本教程的编写过程中，外籍教师 Maxuell Thompson 博士提供了部分素材，Ian Edwards 和 Helen Edwards 进行了加工润色，顺致谢意。

编者

一九九八，六

# Contents

## Unit One

### Text

China's Economic Reform and Opening ..... (1)

### Supplementary Reading

Chemical Industry: A Key Sector Opening to the World ..... (8)

## Unit Two

### Text

Rigid and Flexible Mass Production ..... (14)

### Supplementary Reading

Unique-product Production and Process Production ..... (23)

## Unit Three

### Text

Methods for Energy Conversion ..... (29)

### 科技英语翻译知识(一)

——翻译的质量标准 ..... (38)

### Supplementary Reading

Tapping New Energy Sources ..... (42)

## Unit Four

### Text

The Industrial Ecology of the 21st Century ..... (48)

### 科技英语翻译知识(二)

——语言理解和逻辑理解 ..... (58)

Supplementary Reading

A New Initiative to Save the Planet ..... (61)

**Unit Five**

Text

CAD/CAM Overview ..... (67)

**科技英语翻译知识(三)**

——直译和意译 ..... (75)

Supplementary Reading

Basic Elements of CAM ..... (80)

**Unit Six**

Text

The Productive Utilization of Wealth-producing Resources ... (86)

**科技英语翻译知识(四)**

——选择词义 ..... (95)

Supplementary Reading

The Professor, the University and Industry ..... (100)

**Unit Seven**

Text

All-optical Networks ..... (105)

**科技英语翻译知识(五)**

——词义的引伸和变通处理 ..... (114)

Supplementary Reading

The Wonder of Telecommunication ..... (117)

**Unit Eight**

Text

Conformig products to consumers ..... (122)

**科技英语翻译知识(六)**

——改变词量 ..... (129)

Supplementary Reading	
Quality Control Techniques .....	(133)
<b>Unit Nine</b>	
Text	
Computer Software .....	(138)
科技英语翻译知识(七)	
——科技术语翻译 .....	(148)
Supplementary Reading	
Computer Hardware .....	(151)
<b>Unit Ten</b>	
Text	
Do Some Long-range Listening with Shortwave Radios .....	(158)
科技英语翻译知识(八)	
——变换词类 .....	(166)
Supplementary Reading	
Intelligence in Mation .....	(169)
<b>Unit Eleven</b>	
Text	
The Information Economy .....	(174)
科技英语翻译知识(九)	
——调整词序和句序 .....	(183)
Supplementary Reading	
Digital Literacy .....	(186)
<b>Unit Twelve</b>	
Text	
Robotics in the Immediate Decades Ahead .....	(192)
科技英语翻译知识(十)	
——被动语态翻译 .....	(200)



Supplementary Reading

The common Applications of Industrial Robots ..... (203)

**Unit Thirteen**

Text

Responsibilities of the Plant Manager ..... (208)

**科技英语翻译知识(十一)**

——分译与合译..... (218)

Supplementary Reading

Engineer and Management ..... (221)

**Unit Fourteen**

Text

Intelligent Materials ..... (227)

**科技英语翻译知识(十二)**

——复合句的相互转换 ..... (236)

Supplementary Reading

The Age of Superstuff ..... (239)

**Unit Fifteen**

Text

The Factory of the Future: Technological Aspects ..... (244)

**科技英语翻译知识(十三)**

——长句翻译 I. 结构分析 ..... (254)

Supplementary Reading

The Factory of the Future: Social Aspects ..... (258)

**Unit Sixteen**

Text

A Scientist Looks at Tomorrow ..... (265)

**科技英语翻译知识(十四)**

——长句翻译 II. 行文顺序 ..... (274)

Supplementary Reading

The New Status of the Scientist in Government ..... (278)

**Selections from Scientific Journals with Chinese Translation**

1. Engineers and Environment ..... (285)

2. Competing in the World's Computer Market ..... (289)

3. Role of Business in Society ..... (294)

4. The Developments of Telephone ..... (300)

5. Science and the Future ..... (305)

6. Solar Energy ..... (309)

7. High-Temperature Superconductors ..... (316)

8. The Uncertainties of Technological Innovation ..... (322)

9. E-mail and the New Epistolary Age ..... (327)

10. Finding Pictures on the Web ..... (333)

**Glossary** ..... (339)

**Phrases and Expressions** ..... (362)

## *Unit One*

### **Text**

#### **China's Economic Reform and Opening**

China's reform and opening is aimed at unfettering and developing productive forces. During the process, various difficulties and problems may unavoidably appear. Present major problems feature a weak agricultural foundation, inefficient enterprises and a widening gap of regional economic development.

Proper solutions for such problems will influence construction undertakings and the success of reform.

Most Chinese enterprises are operating well. But some are plagued by difficulties. Their problems are mainly characterized by poor achievements, unmarketable products, outdated technology and equipment, heavy social insurance burdens and redundant personnel.

Such problems are hard to avoid in the transition toward a socialist market economy. They can be resolved only through deepening the reform of enterprises, that is, by establishing, in line with the requirements of a socialist market economy, a modern enterprise system featuring clearly defined property rights, clear-cut responsibility and authority, separation of the functions of government from those of enterprises and scientific management.

At the same time, the effort will be accompanied by improving macro-control, the market system and the social security system. Our purpose is to improve the managerial expertise of enterprises, product quality and efficiency by linking enterprises with the socialist market economy.

Socialist market economy is a structure wherein public ownership plays a dominant role and various economic sectors enjoy common development. China will never go in for privatization, though it supports the development of a private economic sector. The net value of fixed assets of state-owned industrial enterprises accounts for more than 70 percent in the entire industrial sector, while profits and taxes they turn over exceed 60 percent.

The reform of state-owned enterprises is proceeding on a trial basis. Several years ago, the State Economic and Trade Commission and the State Commission for Economic Restructuring designated 1,000 large state enterprises to try out implementation of a modern enterprise system. The output value and profit-tax payment of these firms account for over 50 percent of total enterprises nationwide.

In the meantime, reform of small, state-owned enterprises will be accelerated through various means such as a shareholding system, leasing, contracts and sales. Major efforts will be devoted to reforming state enterprises because it is closely related to the establishment of a socialist market economy and the smooth progress of overall reform.

Generally speaking, inflation in China remained at a relatively low level. The Chinese government has established a moderately tight financial policy designed to gradually bring down inflation, rather than implement radical measures. This strategy is proving correct.

While limiting the money supply, focus has been placed on maintaining the balance between supply and demand. Initial achievements have been scored in accelerating agricultural and sideline production, curtailing loans and investment in capital construction, checking the excessive growth of consumption funds, reducing financial expenditure, establishing order in the circulation field, and unclogging circulation channels.

Through further efforts, the Chinese economy will possibly maintain a sustained, rapid and healthy progress under the circumstances of relatively low inflation.

China has a 1.2 billion population which will be enlarged by 14 million annually in the next five years. China has to rely on itself to solve the problem of feeding its people, otherwise, it will present the world with big troubles. Therefore, China has always regarded agriculture as the foundation of the national economy, and a sector to be given top priority for development.

Government has readjusted the prices of agricultural products and increased the proportion of input in agriculture in the nation's total investment. Within the next few years, investment in agriculture will be raised to a rational level. While fostering farming, measures will be taken to further promote secondary and tertiary industries in rural areas, thereby comprehensively developing rural economies.

Continued efforts will be made to properly run special economic zones and the Pudong New Area in Shanghai, boost the economy in coastal areas and expand opening to the outside world. In the meantime, major attention will be paid to accelerating reform and opening in the central and western regions.

Over the past 20 years, the Chinese economy has become closely

related with the world economy. On the basis of self-reliance, Chinese economy has been motivated and influenced by world economy. Chinese economic boom in turn presents the world with a large market and will certainly become a positive force contributing to the growth of world economy.

Chinese economic development should not be divorced from reform. Deng Xiaoping's theory of building socialism with Chinese characteristics advocates the objectives of emancipating and developing productive forces through reform, accelerating economic progress and improvement of living standards and finally realizing common prosperity. It is a national policy in keeping with the fundamental interests of the Chinese people.

During the past decades, especially since implementation of reform and open policy, China has built a considerable foundation in terms of overall national strength, personnel training and acquired experience. China is currently enjoying domestic political and social stability. Infrastructural facilities have been dramatically improved, the socialist market economic system and the legal network are being perfected.

All these achievements create favorable conditions for further reform and opening to the outside world.

To sum up, the Chinese people will by no means deviate from the road toward a prosperous future, which they have found through painstaking exploration at great cost.

### New Words

1. **unfetter**['ʌnfetə] *v.* 解放; 去掉…的镣铐

2. **undertaking**[ʌndə'teɪkɪŋ] *n.* 事业

(task; work that one has made oneself responsible for)

3. **feature**['fi:tʃə] *v.* 以…为特点;特点是  
(have as characteristics)
4. **inflation**[in'fleɪʃən] *n.* 通货膨胀
5. **plague**[pleɪg] *v.* 困扰  
(annoy, make trouble for)
6. **unmarketable**[ʌn'mɑ:kɪtəbl] *a.* 销路不畅的
7. **outdated**[aʊt'deɪtɪd] *a.* 过时的;陈旧的
8. **insurance**[in'ʃʊərəns] *n.* 保险;保险业
9. **redundant**[rɪ'dʌndənt] *a.* 过多的;多余的  
(more than what is needed)
10. **clear-cut** *a.* (轮廓)清晰的;明确的
11. **macro-control** *n.* 宏观调控
12. **security**[sɪ'kjʊərəti] *n.* 安全  
(safety; freedom from danger or anxiety)
13. **expertise**[ekspə'ti:z] *n.* 专门知识和技能  
(expert knowledge and skill)
14. **asset**['æset] *n.* 财产;资产  
(anything owned by a person, company, etc that has money value)
15. **designate**['deɪzɪneɪt] *v.* 指定;决定  
(appoint; choose for a task)
16. **lease**[li:s] *v.* 出租  
(agree to let another to use for a certain time for a fixed money payment called rent)
17. **shareholding**['ʃeəhəʊldɪŋ] *a.* 股份制的
18. **radical**['rædɪkl] *a.* 激进的;基本的
19. **side-line**['saɪdlaɪn] *n.* 副业;兼职  
(occupation which is not one's main work)
20. **curtail**['kɜ:teɪl] *v.* 削减;缩减;缩短  
(cut off a part of; make shorter than was first planned)

21. **loan**[ləʊn] *n.* 贷款; 借出物  
(sth lent, esp a sum of money)
22. **unclog**[ʌn'klɒg] *v.* 疏通(流体管道)
23. **expenditure**[ik'spenditʃə] *n.* 开销; 经费  
(amount expended)
24. **circulation**[sə:kjuleiʃən] *n.* 流通  
(state of going round continuously)
25. **sustain**[səs'tein] *v.* 支撑; 承受住  
(keep from falling or sinking)
26. **foster**['fɒstə] *v.* 照顾; 关注  
(care for; help the growth and development)
27. **rational**['ræʃnəl] *a.* 合理的; 明智的  
(sensible; that can be tested by reasoning)
28. **tertiary**['tɜ:ʃəri] *a.* 第三位的  
(third in order or importance)
29. **boost**[bu:st] *v.* 推动; 提高  
(give a push up; increase the level, value, reputation, etc of sth)
30. **divorce**[di'vɔ:s] *v.* 使...分离  
(separate)
31. **advocate**['ædvəkeit] *v.* 提倡; 主张  
(support; speak publicly in support of)
32. **emancipate**['i:mænsipeit] *v.* 解放  
(set free, esp from legal, political or moral restraint)
33. **infrastructural**['infɹəstrʌktʃərəl] *a.* 基础的; 永久性的
34. **deviate**['di:vi'eit] *v.* 偏离  
(turn away, leave what is usual, customary, right, etc)

### Phrases and Expressions

1. **go in for** 赞成; 致力于



2. **The State Economic Trade Commission**

国家经济贸易委员会(经贸委)

3. **The state Commission for Economic Restructuring**

国家经济体制改革委员会(体改委)

4. **turn over** 交付;移交

5. **in line with** 与……一致

6. **by no means** 决不;一点也不

(not at all)

### Exercises

#### I. Translation

1. The present problems in China's economy mainly characterized by a weak agricultural foundation, inefficient enterprises and a widening gap of regional economic development.
2. A modern enterprise system features clearly defined property rights, clear-cut responsibility and authority and separation of functions of government from those of enterprises.
3. The Chinese government has established a moderately tight financial policy aiming at controlling inflation, which has proved correct and effective.
4. On the basis of successes and experiences achieved over the past years, China will further its reform and open-door policy with full confidence and even greater efforts.
5. In the five years to come, China will perfect its socialist market system, improve infrastructural facilities, extend both domestic and foreign markets in order to increase overall national economic strength.
6. We sincerely hope to join hands with foreign companies and march toward the 21st century in a joint effort to develop China's economy and promote the common prosperity of