

# 环境科学英汉对照读物

● 李泽江 編著 四川科学技术出版社

HUANJIANG KEXUE YINGHAN DUIZHAO DUWU



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## 前 言

环境科学是一个涉及到自然科学与社会科学的几乎所有学科的庞大科学体系，环境问题是人类当前面临的严重问题之一。随着我国经济建设的飞跃发展，环境污染也伴随而至。专家们断言：80年代中国的环境问题，尤如50年代中国的人口问题。消除污染，保护环境，已成为当务之急，为各界人士所关注。

美国商业机器公司技术开发部主任、著名的Bajorek博士在全美第三十一届环境科学技术会议开幕式上的讲话，从科学技术特别是电子工业技术以及经济发展这一重要侧面，突出强调了环境污染控制的重要性。他说：没有污染控制，就没有微电子技术的发展，也就没有计算机工业，将来科学技术与经济的发展，要极大地依赖于污染控制。

要保护人民的安全与健康，促进环保事业、科学技术与经济的发展，环境科学研究已势在必行，刻不容缓。

环境科学研究工作在国外正蓬勃开展，我国才刚起步。为了借鉴、学习国外先进技术，广大科技人员急需有关环境科学的英语辅助读物，本书就是为这一需要而出版的。本书从近年来出版的多种英美原著中选编出来，介绍了国外有关环境科学的理论、实践、管理与技术，涉及到环境生态、环境污染、环境监测、环境工程和环境管理等方面的知识，内容由浅入深，具有题材不同、体裁多样、语言规范、兼顾科普与专业，以及知集识性、科学性和趣味性于一体的特点，可为广大科技人员的良师益友。

本书可供从事环境科学及有关学科的广大科技人员、大（中）专院校师生、管理干部和有一点英语基础的科普读者与自学者使用。

本书承蒙中国科学院上海分院王克武教授审阅。本书的出版得到重庆大学顾恒岳教授、重庆科技杂志社杨开显编辑的帮助，在此一并致谢。

编者

一九八九年十月

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## 1. Sewage and Industrial Wastes

As a result of pollution, Lake Erie, on the borders of the U. S. A. and Canada, is now without any form of aquatic life.

Pollution in water is not simply a matter of highlyconcentrated "poisons" killing large numbers of fish overnight. Very often the effects of pollution are not noticed for many months or years because the first organisms to be affected are either plants or plankton. But these organisms are the food of fish and birds and other aquatic creatures. When this food disappears, the fish and birds die too. In this way a whole food chain can be wiped out, and it is not until dead fish and water birds are seen at the river's edge or on the sea shore that people realize what is happening.

Where do the pollutants come from? There are two main sources-- sewage and industrial waste. As more detergent is used in the home, so more of it is finally discharged with the sewage into our rivers, lakes and seas. Detergents harm water birds by dissolving the natural fatty substances which keep their feathers waterproof. Sewage itself, if it is not pro-

perly treated, contaminates the water and prevents all forms of life in rivers and the sea from receiving the oxygen they need. Industrial waste is even more harmful since it contains compounds of copper, lead, zinc and nickel, all of which are highly toxic to many forms of aquatic life.

So, if we want to stop this pollution, the answer is simple: sewage and industrial waste must be purified. It may already be too late to save some rivers and lakes, but others can still be saved if the correct action is taken at once.

### Glossary

sewage/'sju(:)idʒ/n. 污水, 污物

waste/weɪst/n. 废物, 垃圾, 废渣

pollution/pə'ljʊ:ʃən/n. 污染

as a result of 由于...的结果

Lake Erie/'iəri/n. 伊利湖

border/bɔ:də/n. 边境, 国界

Canada/'kænədə/n. 加拿大

aquatic/ə'kwætɪk/a. 水生的

aquatic life 水生生物

highly-concentrated/'haɪli 'kɒnsentreitɪd/a. 高度浓缩的

poison/'pɔɪzn/n. 毒, 毒物, 毒药

overnight/'əʊvə'nait/ad. 一夜(间); 一下子

effect/i'fekt/n. 结果, 影响, 效果

organism/'ɔ:gənɪzəm/n. 有机物, 生物体

affect/ə'fekt/vt. 影响; 伤, 害  
 plankton/'plæŋktən/n. 浮游生物  
 creature/'kri:tʃə/n. 生物, 动物  
 in this way 这样, 因此, 用这种方法, (由此) 可见  
 chain/tʃeɪn/n. 链, 链条  
     food chain 食物链, 食物循环  
 wipe/waɪp/v. 擦(掉), 拭去  
     wipe out 消灭, 扫除, 除去  
 it is not until...that... 直到...才...  
 edge/edʒ/n. 边, 缘, 端  
 realize/'riəlaɪz/vt. 认识, 了解; 实现  
 pollutant/pə'lju:tənt/n. 污染物  
 detergent/di'tɔ:dʒənt/n. 去污剂, 洗涤剂  
     a. 净化的, 洗净的  
 discharge/dɪ'stʃɑ:dʒ/vt. 排泄, 排放  
 harm/hɑ:m/n., vt. 损害, 伤害, 损伤  
 dissolve/di'zɒlv/v., n. (使)溶解, (使)分解  
 fatty/'fæti/a. 脂(肪)(质)的, 多脂的  
 feather/'feðə/n. 羽毛  
 waterproof/'wɔ:təpru:f/a. 防水的, 不透水的  
 treat/tri:t/v. 处理, 净化  
 contaminate/kən'tæmɪneɪt/vt. 污染, 沾污  
 prevent...from (v-ing) 阻止... (·); 使...不致 (·)  
 harmful/'hɑ:mful/a. 有害的  
 copper/'kɒpə/n. 铜  
 lead/led/n. 铅  
 zinc/zɪŋk/n. 锌  
 nickel/'nikl/n. 镍  
 toxic/'tɒksɪk/a. (有, 中)毒的, 毒性的

**purify**/'pjuərifai/vt. 使纯净, 净化; 提纯

**save**/seiv/v. (援, 营)救; 节约

**take action** 采取行动, 进行活动

### Notes

1. Pollution in water is not simply a matter of highly-concentrated "poisons" killing large numbers of fish overnight.

对水质的污染不只是一件高度浓缩的毒物一夜间杀死大量鱼类的事情。

highly-concentrated "poisons" killing large numbers of fish overnight 是带有逻辑主语的动名词结构, 作介词 of 的宾语。

2. ...it is not until dead fish and water birds are seen at the river's edge or on the sea shore that people realize what is happening.

...人们直到在河边和海岸上看见死鱼和死水鸟时才意识到正在发生什么事情。

what is happening 是宾语从句。

3. Detergents harm water birds by dissolving the natural fatty substances which keep their feathers waterproof.

去污剂通过溶解水鸟身上能保持羽毛防水特性的天然脂肪质来伤害水鸟。

1) dissolving the natural fatty substances which keep their feathers waterproof 是动名词短语, 作介词 by 的宾语。

2) which keep their feathers waterproof 是定语从句, 修饰 substances.

4. Sewage itself, if it is not properly treated, contaminates the water and prevents all forms of life in rivers and the sea from receiving the oxygen they need.

污水如果没有经过适当处理, 它也会污染水体, 阻碍河流和海洋中各种形式的生命吸收它们所必需的氧气。

1) if it is not properly treated 是条件状语从句。

2) they need 是定语从句, 省略了关系词 which, 修饰 oxygen.

5. Industrial waste is even more harmful since it contains compounds of copper, lead, zinc and nickel, all of which are highly toxic to many forms of aquatic life.

工业废物甚至更为有害, 因为它含有铜、铅、锌和镍等化合物, 而所有这些化合物对许多水生生物都有剧毒。

all of which are highly toxic to many forms of aquatic life 是由代词(或名词) + of + which 引出的非限制性定语从句, 修饰 compounds.

## 2. Atmospheric Pollution

In 1952 London had a very bad four-day smog in which 4 000 bronchitis sufferers died. In 1962 a second major smog occurred and 700 people died.

People who live in heavily industrialized areas do not get as much sunshine as they should. Dust particles floating over a city at altitudes of between 4 000 and 8 000 feet cut out between 20 and 50 per cent sunlight and up to 90 per cent of the ultra-violet light. But dust is not the only thing to worry about. When fuels are burned, whether in a factory, or in a home, or in the engine of a car, carbon dioxide and carbon monoxide are given off. Carbon dioxide in the atmosphere acts as a sort of insulator around the earth, keeping warmth in and so slowly raising the temperature of the earth. This could actually change the climate all over the world. Carbon monoxide is extremely poisonous and quite small amounts can kill.

Everybody wants to have a motor car, and sometimes when we are stuck in a traffic jam it seems as though everybody has already got one. Unfortunately, while giving us so much pleasure,



cars are also poisoning us. The amount of dangerous substances, emitted by a car is quite alarming. Did you know, for example, that a hundred cars produce on average a third of a ton of carbon monoxide, as well as many other toxic substances, every day? When you realize that in Great Britain there are over 18,000,000 motor vehicles, you can see the extent of the problem.

What is the answer then? Scientists are trying to produce a car engine that gives off no pollution at all. But what about the millions of cars already in use? Must they all be thrown away? It would probably be very expensive to modify them so that they, too, are pollutionfree.

### Glossary

smog/smɒg/n. 烟雾

bronchitis/brɒŋ'kaitis/n. 支气管炎

sufferer/'sʌfərə/n. 受害者, 受难者; 患病者

major/'meɪdʒə/a. 较大(范围)的

heavily/'hevili/ad. 重重地; 大量地

industrialize/in 'dʌstriəlaɪz/v. (使)工业化

dust particle 尘粒, 粉状粒子

float/flaʊt/v. (使)漂浮, 浮动

altitude/'æltɪtju:d/n. 高, 高度

cut out 切断, 割掉; 去掉

ultraviolet/'ʌltrə 'vaɪələt/a. 紫外的