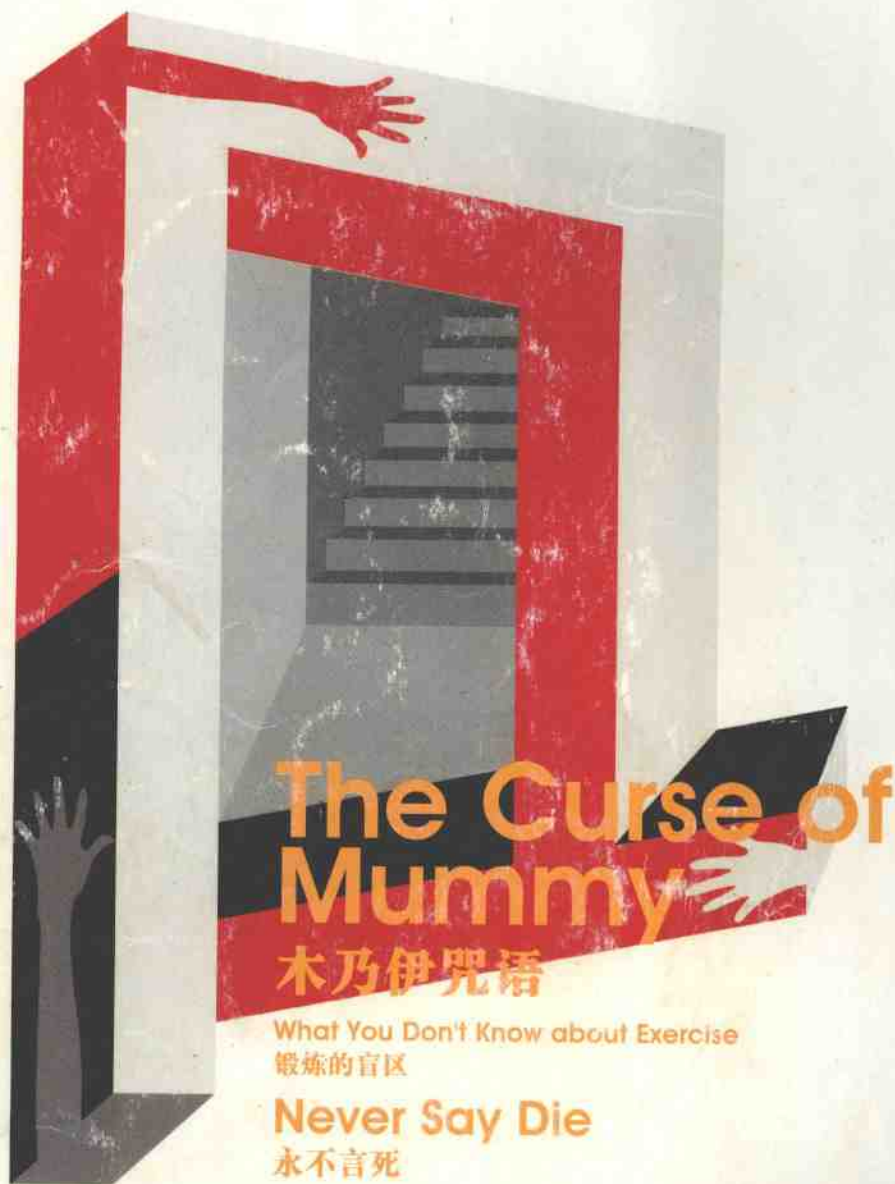


先锋英语

Explorer English

· 2003年第1辑 定价: 4.5元 ·

英语学习系列读物·立足科技的特色英语丛书



The Curse of Mummy

木乃伊咒语

What You Don't Know about Exercise

锻炼的盲区

Never Say Die

永不言死

Science, Technology and Art, Leonardo da Vinci

科艺大师达芬奇

Do People Who Were Born Blind Dream?

盲人会做梦吗?

诺贝尔科学奖得主致信中国公众

去年3月,32位曾获得诺贝尔科学奖的科学家给我国公众的来信和致词在中国科技馆展出,吸引了不少前去参观的青少年、学生家长驻足抄写。这里,我们摘录这些做出重大贡献的科学家的部分信函,读者可从中感受他们对科学的真知灼见。

1951年诺贝尔化学奖得主,美国核化学家格林·西奥多·西博格(Glenn Theodore Seaborg): 倾注科学是一种生活方式

回想起来,在我的成长过程中,既有与众不同的地方,也有许多很平凡的地方。在上高中以前,我完全没有机会接触科学,对于科学的作用几乎一无所知。即使是上了高中以后,我的主要精力还是放在文学课上,与科学有关的科目一门也没学。上高三时,为了考大学才不得不选修了化学。在洛杉矶的大卫·斯达乔丹高中担任化学老师的德怀特·罗根·里德先生是一位对化学充满热情的老师,在他的影响下,我的想像力苏醒了,成了一名不折不扣的化学迷。从那时起,我就下定决心要当一名科学家,并且为此倾注了自己毕生的精力,从未后悔过。因为我从科学那里找到了一种富有探险意味、并能给自己带来巨大满足感的生活方式。



我们生活在一个用金钱来衡量价值的社会,因此一旦自己富有了,便往往过高地评价自身的绝对价值。且不说报酬,我相信每一个人都有这样一种心理上的欲望——都想从自己所从事的工作中发现某些重要性。如果他是一位科学家,这种欲望就表现得更自然、更充分。正因为如此,他们长时间地对自己的研究抱着极大的热情和执著。知识上的满足感、发现时的激动、从事有价值工作的种种感受,都会化作巨大的喜悦,同时也强烈地激励着他们继续研究。

我想,尽管有时社会上的许多人会认为科学家所从事的某项研究对他们的生活而言并不重要,但科学家仍能从中体会到一种以科学为目的的价值和满足。当然,在现实社会中,整个社会都紧紧地依赖着科学家们,这一点不容置疑。科学给了人们一种迎难而上的令人心潮澎湃的兴奋。比起远方的地平线来,能够给世界带来巨大利益的伟大发现就在我们伸手可及的地方。另外,把这些伟大的发现转化为提高人类健康和生活质量所必需的科学技术,为大家提供了继续努力的广阔天地。做出科学发现的人实际上就是能比别人早一步看到和知道新东西的人。

编辑请继续关注!



《英语学习》杂志系列读物

— Explorer English —

(京)新登字 155 号

图书在版编目 (CIP) 数据

先锋英语. 2003 年第一辑 = Explorer English / 《英语学习》编辑部编. —北京: 外语教学与研究出版社, 2002

(英语学习系列读物)

ISBN 7-5600-3112-9

I. 先… II. 英… III. 英语—语言读物
IV. H319.4

中国版本图书馆 CIP 数据核字 (2002) 第 086829 号

先锋英语**主 编:** 侯毅凌**副主编:** 龚雁 李家真**编 辑:** 陈莉 李琦 张徽**责任编辑:** 陈莉**封面设计:** 林力**版式设计:** 宁馨设计工作室**出版发行:** 外语教学与研究出版社 期刊中心**社 址:** 北京市西三环北路 19 号**邮 编:** 100089**网 址:** <http://www.fltrp.com.cn>**电 话:** (010)68917571**E-mail:** explorer@fltrp.com**印 刷:** 北京联华印刷厂**成品尺寸:** 257 × 172 1/16**印 张:** 3**版 次:** 2002 年 12 月第 1 版

2002 年 12 月第 1 次印刷

书 号: ISBN 7-5600-3112-9/H.1611**定 价:** 4.50 元

如有印刷、装订质量问题出版社负责调换
制售盗版必究 举报查实奖励
版权保护办公室举报电话: (010)68917519

— 目 录 —

信息快车

林夕 编译

热点聚焦

Never Say Die

永不言死 ----- 4

The Green Airport

环保机场 ----- 5

Shake Hands over the Internet

因特网上的握手 ----- 6

潮流前沿

Navigation for the Blind

为盲人导航 ----- 7

Tiny Optical Disc Could Store Five Movies

5 部电影, 1 张盘 ----- 8

Mobile Phone System Can Identify

Mystery Music

手机系统识别神奇音乐 ----- 9

望远镜

Bus Shelters to Talk Back

“夸夸其谈”的公共汽车站 ----- 10

Good Legs "Control" Paralysed Partners

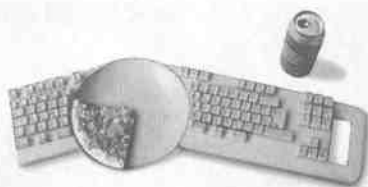
一左一右, “兄弟”情深 ----- 11

Tags Reveal If Frozen Food is Rotten

冷冻食品变质标签 ----- 12

风景线

Future Work ----- 13



— 目 录 —

科海拾贝

人物志

Science, Technology and Art: Leonardo da Vinci

科艺大师达芬奇 / 依君 选注 ----- 15

探索

A Brief History of the Internet

因特网简史 / 李琦 编译 ----- 20

科技日历

Calendar of January ----- 24

未解之谜

The Curse of the Mummy

木乃伊咒语 / 巧哥 选注 ----- 27

百科珍闻

神奇自然

The Bird on the Australian Flag

走上国旗的鸟 / 小伊 选注 ----- 30



Breadfruit Tree

面包树 / 树鹤 选注 ----- 32

生活广角

Nicotine Vaccine Trials to Launch

尼古丁疫苗 / 水青 选注 ----- 34

What You Don't Know about Exercise

锻炼的盲区 / 李井岗 选注 ----- 36

科幻小说

Shoes

有魔力的鞋 / 吴田 选注 ----- 38

名家小品

Nobel on his poor health during his youth and his feeling of it

诺贝尔诗稿 / 老石 选注 ----- 41

加油站

趣味测试

Space: How Out of It Are You?

星空揽胜 / 阿耘 选注 ----- 43



新概念

IT时代新新美语 (2) / 叶苗 选编 --- 46

DoctorAnswer 说

Do People Who Were Born Blind Dream?

盲人做梦吗? / 李琦 选注 ----- 48

卷首语

诺贝尔科学奖得主致信中国公众 ---- 1

开心一刻

卡通漫画 ----- 23

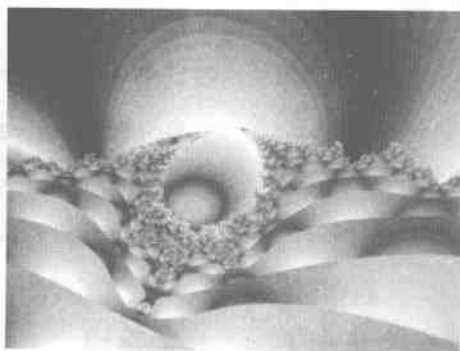
Never Say Die

Never Say Die

永不言死

In 007 movies, James Bond says, "Tomorrow never dies". But now two astrophysicists in USA want to "Never say die".

The recent study shows life in our universe can go on forever. In traditional study, life is doomed because the universe doesn't hold infinite energy and has to face the energy crisis. But professor Freese and Kinney believe that human can come up with to save themselves. Maybe we could use wormholes, short cuts through space-time that would provide access to energy sources beyond our reach. "If wormholes exist," says Freese, "Then life forms could travel through them to mine for energy elsewhere." Or we might, they suggest, become able to make a new universe, which might replace the old one as the home of human.



But they are still the uncertain assumptions. Prof. Kinney says, "Don't ask me how we are supposed to do." ■

在007的电影中，詹姆斯·邦德说“明日不死”；但是，现在美国的两位天体物理学家却想“永远不说死”。

最近的研究显示宇宙中的生命能够一直延续下去。在过去的传统研究中，人们认为：宇宙不能保持无穷的能量，最终不得不面临能量危机，所以生命总有终结。但是 Freese 和 Kinney 教授相信人类能克服危机，拯救自己。或许，我们可以利用“虫洞”——时

空捷径，获得目前还无法得到的能源。

Freese 教授说，如果“虫洞”真的存在，生命就可以通过它到达其他的能量聚集地。而且推想有一天人类可能

建造一个新的宇宙，取代旧宇宙成为人类的家。但是，这些想法还仅仅是假设。Kinney 教授也说：

“不要问我该怎么办。” ■

The Green Airport

——环保机场

It's Monday morning and you've got to catch an 8 o'clock flight. No problem: you live next door to an airport. You leave home and 10 minutes later enter a corner entrance to the garage. You take an elevator nine floors up, to the check-in counters. When your flight is called, you head up to a boarding gate.

At old airports, planes wasted a lot of fuel, as they taxied from gate to runway. At the Green Airport, the plane takes off from a runway adjacent to the gate, rolling downhill. At just a 1 percent decline, the runway gives a Boeing 747 enough of a boost to save 300 gallons of fuel during takeoff, of course the Green Airport runways are about half as long as flat ones and occupies only a third of the area of old-fashioned airports. On your return, the plane lands uphill and uses gravity to help it roll to a stop — without the deafening noises and 500 gallons at each landing. New-invented braking systems store the power created by the spinning wheels, adding to the energy savings. Unlike old airports, the Green airport is so quiet and efficient, a lively city neighborhood has sprung up on its edges. And you like living next door. ■



这是一个星期一的早上，要赶早上 8 点的飞机？没问题：就住在机场的隔壁嘛！你走出家门，十分钟后，就进入了停

车库的拐角入口，坐上电梯直上 9 层，就到了候机大厅。广播登机通知时，你就可以径直走向登机口了。

在传统的机场中，当飞机从停机坪滑行至跑道的过程中，飞机浪费了大量的燃料。在环保机场中，跑道离停机坪距离很近，并沿着下坡滑行，1% 的倾斜角度就可以使一架波音 747 飞机节省起飞时所需的 300 加仑的燃料，当然飞机的跑道也就仅有传统跑道的一半长，整个机场的占地面积也就只有过去的三分之一了。同样，飞机沿上坡着陆时，重力的分力可以帮助飞机停下来——没有震耳欲聋的噪音和每次着陆时 500 加仑燃料的耗费。新研制的制动装置可以储存轮子高速旋转时产生的能量，从而进一步减少燃料的消耗。未来的环保机场噪音污染小并且效率高，丝毫不影响周围的市区——你可能就住在机场的隔壁呢！ ■

Shake Hands over the Internet

——因特网上的握手

Scientists in London and Boston, nearly 5,000 kilometers away, shook hands over the Internet. The implications of the experiment could be vast, which described the event as the world's "first transatlantic handshake over the Internet".

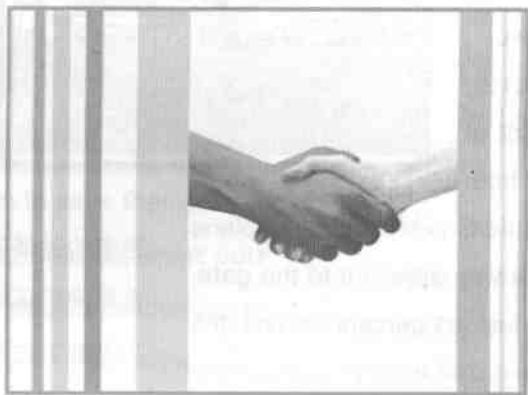
Two scientists picked up a computer-generated cube between them and moved it. Not only

他们 can they feel the force being exerted by colleagues across the Atlantic Ocean, they can also feel the texture of the object they are feeling. The devices called phantoms re-create the sense of touch by sending small impulses at very high

frequencies via the Internet, using newly developed fiber optic cables and high bandwidths.

There is a lot convenience through the connection via the Internet. Surgeons could use it to practice operations over the distance. It also would have recreational uses, allowing people to touch and feel each other over the Internet.

However, don't expect to find computer software in the shops during Christmas. Researchers don't think it'll be available to the public for at least five years. ■



伦敦和波士顿的科学家通过因特网握手，而两地相距近5,000公里之遥。这次试验成功的意义相当重大，被认为是有史以来第一次借助互联网手段跨越大洋的握手。

两位科学家拿起了一个由计算机虚拟

的立方体，然后移动它。他们不但能感受到大西洋彼岸的对方施加在立方体上的力量，而且还可以感受到所触摸物体的质地。这

项被称作“幻影”的装置使用了新开发的光纤电缆和很大的带宽，通过因特网高频地传送微弱脉冲，从而重新建立起触觉。

网络为媒的联系方式带来了极大的方便：外科医生们可以进行远程手术，当然也有一些娱乐用途，它可以使人们通过网络接触或感受对方。

然而，不要以为圣诞节的货架上就可以买到配套的软件。研究人员认为至少五年之内这项技术不会对公众开放。 ■

*Each other
over the
Internet
Internet*

Navigation for the blind

Navigation

为盲人导航

University of Florida researchers have wedded speech recognition software, wearable computers, satellite positioning technology and other emerging technologies in a navigational aid for the blind.

Connected with a map database server, which holds information of the UF campus, the prototype responds to instructions verbally. Speaking into the microphone, the user tells the system his location and destination, the system responds with directions based on the starting point and may even remind him of the traffic rules.

The biggest challenge the navigation system is facing is that the database used consists only of the UF campus, the current system could not be used outside the university. But the researchers reveal confidence about the future.

The director of the National Federation of the Blind said there are no similarly comprehensive electronic navigation systems currently on the market. As they become more practical, such systems could be helpful to some blind people. UF's researchers hope to develop the system into a commercial product in the next two years. ■



佛罗里达大学的研究人员将语音识别软件、佩带式袖珍电脑、卫星定位技术和其他几项最新技术结合起来，用于一种专为盲人服务的导航系统。

连接到一个配置有佛罗里达大学校园信息数据库的服务器之后，样机就可以口述导航指示。使用者只要对着麦克风说出所处的位置和目的地，系统就可以以现在的位置为起点，指示方向，甚至可以提醒使用者注意交通规则。

这套导航系统面临的最大挑战就是目前使用的数据库仅包含佛罗里达大学的信息，也就是说目前的系统不能在校园以外使用。但是研究人员对它的未来充满信心。

国家盲人联合会主席说目前市场上根本没有类似的功能如此齐全的电子导航系统，只要这套系统能够提高实用性，那么它一定会对盲人十分有用。佛罗里达大学的研究人员希望能在两年之内将该技术转化为产品引入市场。 ■



可存5部电影的小型光盘

Tiny optical disc could store five movies

5部电影, 1张盘

Two years from now the world's smallest optical disc will store five two-hour movies, squirrel away 25,000 digital photos or hoard 48 hours of MP3 music.

In Japan last week, Philips demonstrated Small Form Factor Optical (SFFO) discs to confirm that it really is possible to store four gigabytes on a 3cm disc, and to make a drive as small as a memory card that can read it reliably. SFFO is based on Blue-ray, the emerging standard for a system that will use blue lasers to record high-definition TV pictures on DVD-sized discs. Blue-ray is backed by a group of leading firms, including Panasonic, Pioneer, Philips, Samsung, Sharp and Sony.

The 3cm disc will be the same thickness as a DVD, but the phase-change material that records the data will be a mere 0.1mm thick, compared to 0.6mm for DVDs. Philips says this should mean there is less risk of beam distortion and less effects on the playing when the portable device gets jogged. Portable DVD players will not play smoothly if jogged. The drive is currently 0.5cm thick, 5.6cm long and 3.4cm wide.

Four-gigabyte-disc brings the larger capacity for the consumers, as well as the more convenience. However, it is not the end, but a beginning for the memory instruments with more capacity. ■

两年后,世界上体积最小的光盘将可以储存5部两小时的电影,25,000张数码照片或者48小时的MP3音乐。

上周,飞利浦公司在日本公开展示了小封装模块(SFFO)光盘,用事实证明在一张3厘米的光盘上确实可以存储40亿字节,同时展出的还有只有内存条大小的SFFO光盘驱动器。

SFFO光盘基于“蓝光技术”研制,它是一项利用蓝色激光束在DVD大小的光盘上记录高清晰电视图片的新兴技术,由包括松下,先锋,飞利浦,三星,夏普及索尼在内的众多知名公司支持。

这个3厘米光盘和普通DVD一样厚,但是记录数据的相变材料却只有0.1毫米厚,而DVD的相变材料厚度达到了0.6毫米。飞利浦公司解释说这就意味着当便携式播放装置遇到震动时,激光束弯曲变形的可能性大大降低,因此对播放的影响也就大大降低;而便携式DVD播放机在遇到震动时,就无法正常运行。所展示的光盘驱动器大小为0.5厘米厚,5.6厘米长,3.4厘米宽。

40亿字节存储容量的光盘为人们带来了更大的存储空间,也带来了更多方便,然而,这并不意味着终结,而是一个新的开端,今后一定会出现更大的存储工具。 ■

Mobile phone system

can identify mystery music

A new system combining a mobile phone and a cryptographic technique will soon allow you to get the name of music when you hear on the radio.

Electronics giant Philips has a disarmingly simple idea: as the tune is playing, you can dial the number of a service provider and place your cellphone near the radio (or TV) speaker for a few seconds. A computer system analyses the music and checks it against a vast database. Moments later, you should get a message naming the tune. It will even give you some advice of buying the CD.

Researchers in Philips divide the sound of a song or instrumental piece into 33 narrow frequency bands and then mark each band as a unique hash code. Besides this, Philips wants to set up a central database of hash codes. When a cellphone sends the sound of unknown music to the database, the

database "hashes" the incoming sound and compares it with its stored codes. When it finds a match, the database sends back the message, identifying the song.

Researchers reckon playing just three seconds of a song will be enough to identify it from the database. ■

不久，一个融合了手机和编码技术的新系统将使你听音乐时就可得知曲子的名字。



电子巨人飞利浦公司开发这一项目的想法十分简单：当曲子奏响时，你只要拨通一个服务电话，把手机放在收音机（或电视）的扬声器旁几秒钟，计算机系统就会分析这段音乐，根据数据库的信息核对曲目，一会儿，你就可以得到有关曲名的信息，它甚至还会给你一些购买 CD 的建议。

飞利浦的研究人员将一个曲子或乐章分割成33个窄频区域，然后给每个区域标出不同的哈希代码。此外，飞利浦公司还想设立一个哈希代码的中心数据库。当手机将一段不知名的乐曲输给数据库时，数据库会仔细辨别输入的声音，将它与存储的代码相比较。一旦发现与之相匹配的信息时，数据库就会将识别出的曲目信息传回给手机。研究人员估计该系统只需要3秒钟的演奏，就足以从数据库中识别曲目。 ■

手机系统识别神奇音乐



Bus shelters to talk back

“夸夸其谈”的公共汽车站

Talking, touch-screen bus shelters are scheduled to arrive on Paris and Brussels streets next year. Made of ordinary glass, they will show the needed information at a tap or a word.

Maps, weather forecasts, emergency services and advertisements could all be at pedestrians' fingertips. "It's a novelty and a tool," says the inventor for the interview in Paris.

The inventor transforms standard glass into an interactive window via its vibrations. Tapping the screen creates a circle of vibrations, like the ripples in a pool. These travel through the glass to sensitive detectors at each corner that calculate where the screen was tapped. Speaking into the glass creates sound vibrations that detectors can also locate and record. Recently the inventor has added a talkback feature — electrical vibrations can be transferred to the glass so it behaves like a giant loudspeaker. ■

明年，在巴黎和布鲁塞尔的街头预计将出现一种触摸式有声的公共汽车站。只要轻轻一点或是一个命令，这个由普通玻璃制造的屏幕就可以显示需要的信息了。

地图，天气预报，紧急救援和广告都可以出现在行人的指端。它的发明人在巴黎接受采访时说：“它是一个新奇的发明，同时又是一个好帮手。”

发明人利用振动原理将普通玻璃转变成了互动的窗口。就像水池里泛起的水波一样，触动屏幕会引起一连串的振动。这些振动通过玻璃传导到屏幕四角的灵敏感应器上，感应器再定位触摸的位置。对着屏幕讲话发出的声音也可以引起振动，感应器也可以将其定位和记录下来。最近，发明人又为它配置了一个对讲系统——电波引起的振动能转移到玻璃屏幕上，这样屏幕就好像是一个巨大的扬声器。■



Sound vibrations
electrical
loudspeaker or

Good legs "control" paralysed partners

一左一右，“兄弟”情深

Two men paralysed on one side of their body can walk again, thanks to an ingenious implant in a healthy leg to control a paralysed one.

Both men, aged 47 and 64, had been paralysed by strokes. Previously neither could walk unaided. But after sensors were placed over certain muscle groups on the healthy leg and stimulators implanted in the paralysed leg, they can now walk, stand and sit. The unique therapy allows them to move their paralysed leg in a natural way.

Producing movement in limbs by electrically stimulating muscles or nerves is known as functional electrical stimulation (FES). One of the difficulties of using conventional FES is overcoming spasticity. However, in the new system, muscle sensors monitor signals from the patient's able leg. These are used to trigger pre-programmed electrical impulses in 11 electrodes implanted near nerves in the paralysed leg. This lets the paralysed leg do what the patient wants it to do — by taking its cue from the good leg. Not only that, but the electrical stimulation itself has a therapeutic effect, preventing the leg muscles from getting stiff.

But it could be another five years or more before the technology becomes available, researchers said. ■

两个半身不遂的病人又能行走了，这得益于在他们健康腿内植入的一个精巧装置。

年龄分别为 47 岁和 64 岁的两位男子过去都因中风偏瘫，根本无法独立行走。但是，自从在健康的腿部肌肉内安装了传感器，并在另一侧的病腿内植入刺激感应器后，他们就能自由行走、坐下或站立了。

这种独特的疗法使他们可以正常地移动麻痹的腿。

利用电流刺激肌肉或神经从而移动四肢的治法被称作“功能性电刺激 (FES) 疗法”。一般的“FES 疗法”的缺陷之一在于无法克服肌肉痉挛。然而，这种新疗法是通过肌肉内的传感器监测发自健康腿部的



信号。这些信号刺激植入在患侧腿部神经附近的 11 个电极，引发预先设置的电脉冲，使残疾的肢体通过接受来自健康腿部的信号，完成病人的行动意愿。此外，电刺激本身也有一定的疗效，可防止腿部肌肉僵硬。

研究人员说，尽管如此，此项技术用于临床至少还需五年的时间。 ■

Tags reveal if frozen food is rotten

冷冻食品变质标签

A simple plastic disc designed to sit inside food packaging changes colour when exposed to the noxious vapours given off by rotting food. Its developers hope it will provide a simple way for consumers to tell whether food has gone off.

Researchers at the US National Center for Toxicological Research in Arkansas, created the polymer discs. They contain complex organic dyes that change colour drastically from clear to telltale pink, blue or yellow, depending on the type of food. Reference colours printed on the packaging will let people judge if food has gone bad.

The first disc is expected to be an indicator for frozen fish and shrimps. The organic dye for this tag is similar to one used to make bubblegum pink and reacts with the stinking vapours produced by rotting fish. Frozen vegetables are next.

Some sort of user-friendly device would be ideal for the home. While the tags could be available within two years, supermarkets may not be too keen to adopt them if it means they end up throwing away more spoiled food than they normally would. ■

放置在食品包装袋内的塑料圆盘暴露在变质食品释放的有害气体中时，它会相应地改变颜色。它的发明人希望能够为消费者提供一种简单的方式去判断食物是否已变质。

阿肯色州的美国国家毒理学研究中心的研究人员研制了这种聚合材料的塑料盘。盘中含有复合型有机染料，这些染料的颜色会发生戏剧性的变化，从无色透明到显示变质的粉色、绿色或黄色，变成哪种颜色与食品种类有关。食品包装上印有参考色以帮助人们辨别袋内的食品是否已变质。

这种指示盘将首先用于冷冻鱼虾。指示盘的有机染料类似于使泡泡糖变红的材料，遇到烂鱼释放的臭气后，染料就会变色。下一步将针对冷冻蔬菜。

对家庭来说，一些方便消费者使用的小发明可以说是再好不过了。但是，这种指示盘虽然在两年内即可投入使用，超市却可能不太乐于接受，因为这就意味着他们要比以前扔掉更多的过期食品。 ■



Future Work



Business in Bed

Get your best ideas in bed? Then you might want to daydream in this one. The bed has a built-in PC and speakers imbedded into "smart pillows". The artist shows how technology, incorporated into domestic objects, can help put ideas immediately into action.

TV Dinner

For those who spend more time in front of a computer than watching TV, this piece applies the TV dinner concept to today's high-tech driven habits. The user can fit a slice of pizza into a portable keyboard and not interrupt computer interactions.



Netsurfer

Want to take a ride on the Net? This workstation will take you to new heights of comfort. The chair allows the user to balance between working and lounging, putting all the necessary office tools within reach and aiding the quest for maximum efficiency.



Vertical Horizon

In the age of multitasking, it's no wonder that many people have cluttered workstations. The artist offers a new way to organize tasks so they are more accessible. An added bonus: The scooter chair allows for hands-free mobility. ■



想知道什么叫“以人为本吗”？看看下面来自现代艺术博物馆的几则创意，保管让你偷着乐。

未来生活有高招儿



工作席梦思

想在床上突发奇想？那可就得在这样的一张床上白日做梦了。这张特殊的床内置了一台个人电脑和一个会说话的“智能枕头”。艺术家想告诉我们一经与家居用品合为一体，技术如何立刻使想法成为现实。

用餐键盘

对于那些盯着电脑的时间远远多于看电视的人来说，这一发明正是考虑了当今高科技时代人们的生活习惯——边打电脑边吃饭。人们可以手持方便键盘，中间放一片皮萨饼，同时又毫不影响与电脑的交流。



网上冲浪椅

想上网冲浪吗？这台工作站将带给你前所未有的舒适感觉。这台冲浪椅将令你在工作的同时身体能保持适度放松，所需的办公用品全部伸手可及，最大限度满足高效率的要求。

立体化工作间

在“一心多用”的快节奏时代，许多人的办公区混乱不堪就不足为奇了。艺术家的这个创意为人们提供了一种更方便取用物品的方式，以便更好地协调手头的工作。它还有一项好处：一把底部装有滑轮的椅子让使用者在轻松移动的同时能腾出双手。■



Science, Technology and Art : Leonardo da Vinci

——科艺大师达芬奇——

■ By Bob Brown

■ 依君 选注

Would you believe that the artist who painted the most famous picture in the world was also one of the world's greatest scientists and inventors?

This was Leonardo da Vinci, the creator of the painting *La Gioconda*, commonly known as the *Mona Lisa*.

He invented the parachute, the helicopter, the turbine engine, a variable speed drive something like that used in automobiles, a projector, a lens grinder, a pulley system, aerial bombs, machine guns, submarines, canal locks, diggers, a printing press, an air conditioner, a lifting jack, roller bearings, a pump, a power saw, a cannon, a ship's hull, a clock, a revolving stage — and this is only the beginning of the list.¹

He did not live to see many of his inventions used, and many people of his day thought him just a little crazy. You see, this was even before Columbus sailed to America.

His father, Piero da Vinci, was a prominent notary² and lawyer in the little village of Vinci. His mother, Caterina, was a peasant girl. Soon after his birth he was taken to live with his wealthy grandparents, who gave him all that a young boy needed in the way of food, home, and education. He did not always agree, however, with their ideas and wishes for his education. They thought he should be a lawyer, but young Leonardo was bored by such notions.

His father saw that the boy had talent in painting, and showed some of his son's drawings to



1. He invented...the list: 他发明过降落伞、直升机、涡轮发动机（一种类似汽车上装的变速传动装置）、幻灯机、透镜研磨器、滑轮装置、空投炸弹、机关枪、潜艇、运河船闸、挖掘机、印刷机、空气调节器、千斤顶、滚柱轴承、水泵、机动锯、火炮、船体、钟、旋转舞台——而这一切仅仅是他众多发明中的极小一部分。

2. notary: 公证人。

2001年10月31日，在北欧的寒风细雨中，挪威王后和500多名各界来宾为一座造型独特的大桥剪彩。直升机在人们头顶盘旋，起重机缓缓掀起了足有4.8万平方英尺的白色幕布，一座100米长、8米高的木桥展现在大家面前，三个浅色的木拱如同三只被射手用力向后拉的硬弓，牢牢地支撑着桥身。令人难以置信的是，这座桥的设计者竟是500年前的达芬奇！也正因此，桥被命名为“蒙娜丽莎”。



列奥纳多·达·芬奇(Leonardo da Vinci 1452-1519)作为文艺复兴时期最卓越的代表人物，他的成就和贡献是多方面的。他一面热心于艺术创作和理论研究，另一方面也潜心研究自然科学。

a great Florentine³ artist of the day, Andrea del Verrocchio⁴. The artist, recognizing talent, was delighted to take Leonardo as a pupil.

His studies included painting, sculpture, and engineering. By the time he was twenty his work was so good that he was admitted to the painters' guild of Florence⁵. He left Verrocchio when he was twenty-five, and from then until he was thirty he lived well, fulfilling commissions for paintings. He had a house, servants, and horses.

Leonardo boasted of his accomplishments in a letter of application for a job in 1481, written to Ludovico Sforza, the ruler of Milan, who was threatened by powerful military forces of Venice, Rome, and France.⁶ He wrote:

1. I could build light bridges, easily moved, and heavy bridges to resist attack and be raised and lowered. I could burn and destroy enemy bridges.

2. For attack, I could drain moats and build scaling ladders⁷.

3. To defeat strong enemies, I could carry out mining



3. Florentine: 佛罗伦萨画派 (的)。这是意大利文艺复兴时期在佛罗伦萨形成的一个重要画派。

4. Andrea del Verrocchio: 安德利亚·伏罗秋，意大利15世纪著名美术家。

5. The painters' guild of Florence: 佛罗伦萨美术家协会。

6. Leonardo...France: 列奥纳多在1481年写给米兰君主的一封信中自豪地夸耀了自己的才能，当时这位君主正受到来自威尼斯、罗马和法国三方的强大军事威胁。

7. scaling ladder: 云梯。

