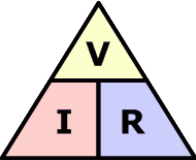


<p><b>Germanium's Properties</b> 锗的特性</p>	<p>Germanium is a chemical element with the symbol Ge and atomic number 32. 锗是一种化学元素，符号 Ge，原子序数 32。</p> <p>Pure germanium is a semiconductor, only under certain conditions it will be able to conduct electricity. One such condition is temperature; Germanium will be able to conduct electricity when temperatures are above 32°C. 纯锗是一种半导体，只有在一定条件下才能导电。其中一种条件是温度。在 32 °C 以上时，锗将能够导电。</p>
<p><b>The Ohm's Law</b> 欧姆定律</p>	<p>The Ohm's Law is a formula used to calculate the relationship between voltage, current and resistance in an electrical circuit. 欧姆定律用于计算电阻电路中电流、电压、电阻和功率之间的关系。</p> <p><b>Voltage 电压 (V) = Current 电流 (I) X Resistance 电阻 (R)</b></p>  <p>Resistance refers to the measure of the opposition to current (electron) flow. The larger the resistance, the greater the barrier against the flow of current. Resistance of a material depends on the nature of the material and temperature. 电阻是指对电流（电子）流动的阻力的量度。电阻越大，电流流动的障碍就越大。材料的电阻取决于材料的性质，温度。</p> <p>There are ions in the body. These ions have a positive or negative charge. When there are too many positively charged ions in our body, our blood pH will be more acidic, leading to negative effects on health. Most illnesses and diseases thrive when the body's pH levels are unbalanced. 人的身体里有离子，这些离子带正电或负电。当我们体内带正电的离子过多时，我们的血液 pH 会偏酸性，从而对健康产生负面影响。当身体的 pH 值水平不平衡时，大多数疾病都会滋生。正离子增加是引起疾病的关键。</p>
<p><b>Experiment #1</b> 实验#1 (1/2)</p>	<p>Heat can change to the electrical resistance of the Germanium mineral. 温度可以改变锗的电阻。</p> <p>In this experiment, the resistance of Germanium decreases when the body comes into contact with the Germanium ball. 这个实验演示，当身体与锗接触时，锗的电阻会降低。</p>

<p><b>Experiment #1</b> 实验#1 (2/2)</p>	<p>Applying the Ohm's Law to Germanium, when there is an increase in temperature, there will be current flow, and Germanium's resistance decreases. 用欧姆定律解释，当温度上升时，锗的电阻会降低，电流（电子）流动会更容易。</p>
<p><b>Experiment #2</b> 实验#2</p>	<p>In this experiment, the closed circuit is connected with normal light bulb and batteries. The batteries have sufficient energy to light up the bulb. 这个实验演示在闭合电路中，电池有足够的能量和电流点亮灯泡。</p>
<p><b>Experiment #3</b> 实验#3</p>	<p>The closed circuit now includes a Germanium ball. 这个闭合电路包括一个锗球。</p> <p>Even though it is a closed circuit, the bulb does not light up. This is because Germanium is an insulator under room temperature (25°C), it has more resistance and hence there is insufficient energy to light up the bulb. 即使是闭合电路，灯泡也不亮。这是因为锗在室温（25°C）下是绝缘体，它具有更大的电阻，因此没有足够的电流来点亮灯泡。</p> <p>When the Germanium ball is heated with a lighter (200°C), Germanium is now a conductor and its resistance drops, hence the bulb will light up. 当我们用打火机（200°C）把锗球加热时，锗会变成导体，它的电阻下降，电流增强，因此灯泡会亮起。</p> <p>When the lighter (source of heat) is removed, the light bulb starts to dim. When temperature decreases, it results in an increase in resistance, hence decreasing the current (electron) flow, hence the bulb is unable to light up. 当打火机拿开时，灯泡开始变暗。温度降低时，会导致锗的电阻增加，减少电流（电子）流动，因此灯泡无法点亮。</p> <p>Therefore, temperature impacts the resistance levels of the Germanium. 因此，温度会影响锗的电阻。</p>
<p><b>Germanium's Effects</b> 锗的效果/作用 (1/3)</p>	<p>Germanium is safe to use on the human body. 锗可以安全适用于人体。</p> <p>The human body will not be able to reach such high temperatures like those of the lighter. But the human body's temperature is sufficient for Germanium's properties to be activated.</p>

**Germanium's Effects**  
**锗的效果/作用**  
**(2/3)**

虽然人体的体温是不会高达打火机的高温度，人体的体温是足够激活锗的特性。

When temperatures are above 32°C, Germanium becomes a conductor. Two main benefits of Germanium are the positive-hole effect and far-infrared ray (FIR).

当温度高于 32°C 时，锗会成为导体。锗的两个主要好处是正孔效应/离子效应和远红外线 (FIR)。

**1. Positive-Hole Effect 正孔效应/离子效应**

The Positive-Hole Effect explains that when the Germanium comes into contact with a person's skin, negatively charged free electron will seize a positively charged ion, maintaining the body's ion balance.

当锗接触到人体的皮肤，它将产生离子效应，即带负电荷的自由电子将抓住一个带正电的质子，调整身体的正负离子，并恢复平衡。

If there are too much positive ions in the body, then our body will be more acidic and have aches and pains. There will also be body static due to the build-up of positively charged ions in the body.

如果体内的正离子过多，我们的身体的血液(pH)就会倾向酸性，而且身体会酸痛。体内带正电离子过，我们的身体会有静电。

When the ions in our body are balanced, there would be improvements to our health. The blood would also be more alkaline, our body's metabolism increases and our body's immune system is strengthened.

当我们体内的离子平衡时，我们的健康就会有改善。我们身体的血液会倾向碱性，新陈代谢增加，身体的免疫系统加强。

We would also see lesser body static, as the excess positively charged ions in the body are released from the body through the germanium acting as an earthing system.

我们身体静电会减少，因为身体中多余的离子会通过锗从身体释放出来。

**2. Far Infrared Ray (FIR) 远红外线**

When temperatures are above 32°C, Germanium emits Far Infrared Rays of between 6 to 14 microns.

当锗达到高于 32°C 以上的温度时，锗会散发出 6 至 14 微米的远红外线。

<p><b>Germanium's Effects</b>  <b>锗的效果/作用 (3/3)</b></p>	<p>FIR activates the water molecules in our body cells, which enhances blood circulation, increase the oxygen level in the body and strengthens the body's systems.  远红外线激活人体细胞的水分子，从而促进血液循环，提高了体内氧的水平，增强排汗系统。</p> <p>FIR increases the number of red blood cells and haemoglobin, which increases blood circulation by 3 times and blood volume by 300%.  远红外线增加红细胞和血红蛋白数量，血液循环将增加 3 倍，而血容量将增加 300%。</p> <p>FIR has beneficial effects on cardiovascular function as it increases nitric oxide (NO) production, which vasodilates the vascular walls.  远红外线对心血管功能有益，因为它会增加一氧化氮 (NO) 的产生，而扩张血管壁。</p> <p>FIR activates the endothelium cells (inner layer of blood vessel) to produce Nitric Oxide (NO).  远红外线激活内皮细胞(血管内膜)产生一氧化氮 (NO) 。</p> <p>Nitric Oxide (NO) helps the blood vessel to dilate which enhances our body's blood circulation and improves the oxygen level, encourages metabolism and speed up self-healing to relieve pain.  一氧化氮给予血管壁良性刺激，使血管壁扩张，从而促进血液和氧气循环以及提高新陈代谢的效果、加速自愈力以缓解疼痛。</p> <p>Nitric Oxide also keeps the blood vessels relaxed and elastic, which helps to keep the blood vessels healthy and slow down the aging of the blood vessels.  一氧化氮使血管放松以及保持血管有弹性，从而保持血管的健康，延缓血管老化。</p> <p>The Germanium ball used in this video is not new. This shows that the Germanium's effects will not decrease over time.  本视频中使用的锗球不是新的。这表示锗的效果不会随着时间的推移而减弱。</p> <p>Moreover, for the experiments to work, Germanium has to be of high purity.  此外，锗必须是高纯度的，这个实验才可以进行。</p>
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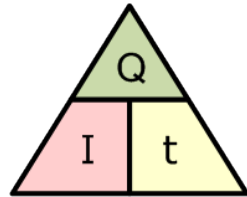
**Multiplied Effect**  
成倍增加效果

Only 1 Germanium ball was used in this experiment.  
本视频里的实验只用了一粒锗球。

The effect of Germanium will be multiplied according to the number of Ge balls on OWELL's BIO-Ge Titanium Health Accessories.

锗的效果将根据 OWELL BIO-Ge Titanium Health Accessories 上的锗球数量成倍增加。

**Charge 电量 (Q) = Current 电流 (I) X Time 时间 (t)**



You can apply the formula  $Q = I \times t$ , whereby in the same time (t) period, current (I) increases and charge (Q) increases.  
此处可以导入公式  $Q = I \times t$ , 相同时间 (t) 内, 电流 (I) 增强, 电量 (Q) (电子流量) 增加。

Germanium can alleviate pain and discomfort when used at the specific body part.  
在特定身体部位使用锗可以减轻疼痛。

It is also safe when multiple BIO-Ge Titanium Health Accessories are worn at the same time.  
同时佩戴多种锗钛保健首饰也是安全的。

Wearing different BIO-Ge Titanium Health Accessories (bracelet, necklace, anklet, belt and crown) can have an effect on different parts of the body and internal organs.  
佩戴不同的锗钛保健首饰 (手链, 项链, 脚链, 腰带, 头链) 可以增对不同的身体部位和内脏器官。

As the size and number of Germanium balls worn increase, the overall effect of Germanium on health will also increase.  
锗球的大小和数量增加, 使效果会更显著。

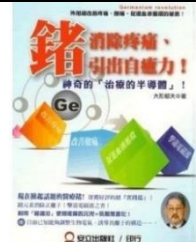


## 锗(Ge)惊人的效果 锗(Ge)惊人的效果

	<p>纯锗是半导体物质。半导体依条件的不同，有时成为可以通电的导体，相反的，也可以成为不同电的绝缘体，而介于两者之间的物质。</p> <p>Pure germanium is a semiconductor. Semiconductors are solids whose conductivity lies between the conductivity of conductors and insulators. Depending on the conditions, germanium can become a conductor or insulator.</p>
p. 21	<p>锗会因温度（热）、光、电磁波等的强弱，使的负自由电子经常产生变化而释出。</p> <p>Depending on the strength of temperature (heat), light and electromagnetic waves etc., negative free electrons will be released from the body.</p>
	<p>锗在自然环境下能够产生反应。</p> <p>Reactions will occur when germanium is in the natural environment.</p>
	<p>与此相比，虽然硅、钛等均是半导体，但是如果不给特殊条件，就不会产生反应。</p> <p>Similarly, silicon and titanium are semiconductors, but no reaction will occur if the conditions are not met.</p>
p. 22	<p>疼痛的原因是过剩残留电，可以藉着锗粒子的功能中和过剩的正离子。</p> <p>Aches and pains are a result of excessive electrons in the body, and Germanium can help to neutralize the excess positive ions in the body to regain ion balance.</p>
p. 24	<p>人体经常制造出来的电量，一旦超过一定量以上而蓄积下来时，会自然放电。</p> <p>Accumulated excess electrons in the body is released through body static.</p>
p. 26	<p>高纯度的半导体锗，在常温下会大量产生自由电子，深入体内。若不是高纯度（99.9%）的锗，则无法进行调整生物电流的工作。</p> <p>High-purity semiconductor germanium will generate a large number of free electrons at room temperature and penetrate deep into the body. If the germanium is not of high purity, it would not be possible to adjust the bioelectric current.</p>
p. 27	<p>酸痛或疼痛是身体发出的警讯。在过度疲劳或压力的状态下，免疫力减退，体力、力气、抵抗力衰退而引发疾病。疲劳、疼痛的警讯就容易生病。饮食生活和运动不足可以靠著自己的努力改善到某种程度。</p>


	<p>Aches and pains are warning signs sent out by the body. Under stress and fatigue, the body's immune system will weaken, and thus causing you to fall sick easily. Aches and pains tell you that your body systems are weakening, and are signs that you may fall sick. Despite a balanced diet, your body can still be affected if you do not have enough exercise or under stress. Therefore, you need a balanced lifestyle to help your body function at its optimum.</p>		
p. 32	<b>负离子和正离子各自具有的效果</b> <b>Effects of positive ions and negative ions on the human body</b>		
		<b>负离子</b> <b>Negative Ions</b>	<b>正离子</b> <b>Positive Ions</b>
	呼 Breathing	稳定、轻松 Stable and easy	痛苦 Difficult
	脉搏跳动 Pulse Rate	减少 Reduces	增加 Increases
	血管 Blood vessels	扩张 Dilate	收缩 Constrict
	血压 Blood pressure	正常 Normal	升高 Increases
	血液 Blood pH	倾向碱性 More alkaline	倾向酸性 More acidic
	尿 Urine	促进利尿作用 Promotes diuresis	抑制利尿作用 Inhibit diuretic effect
	骨骼 Bones	强韧 Strong	脆弱 Fragile
	自律神经 Autonomic Nervous System	功能镇静化 Autonomic nerves function properly	功能紧张 Tense autonomic nerves
	疲劳 Fatigue	促进疲劳消除 Reduces fatigue	延迟疲劳消除 Easily fatigued
	发育 Puberty	促进 Promotes puberty	不良 Bad puberty progress
p. 33	<p>人体内经常有一定的电流流通。 当然，不只是脑、心脏等重要器官有点流动，肌肉、内脏等也有电流动，而且全都是维持稳定、正常的电流。 The human body is constantly using electric signals to communicate, move and think. When there is excess electricity in the body, body static will be produced.</p>		
p. 37	<p>另一个能够简便释出过剩蓄积的电的方法，也就是锗健康法。 Germanium's health benefit is that it helps to release the excess positive ions in the body and maintain ion balance.</p>		

p. 38	<p>人体必需要释出过剩蓄积的电，否则会造成停机现象。防止人体停机的最简便的方法，就是实行锗健康法。</p> <p>There needs to be electricity flowing through the body, if there is no electric flow then the human body will stop functioning. Using germanium is a good way to prevent the electric flow from stopping.</p>
p. 49	<p>锗受到注目的原因，就是因为这物质和人体与人类的身体一样是半导体。所谓半导体，即在低温时，电气无法通过，但在温度上升时，即成为电气通过的物质。半导体对健康有何益处呢？那就是平常电气无法通过的锗，在与人体的体温温度接触时，就开始产生渗透到体内的作用。</p> <p>The human body is a semiconductor. At low temperatures, electricity is unable to pass through. But when temperature increases, it is able to conduct electricity. Electricity is unable to pass through Germanium usually, but when Germanium comes into contact with the human body, it is able to penetrate deep into the body due to temperature changes.</p>
p. 85	<p>正离子增加是引起疾病的关键。</p> <p>Positive ions are the key cause of diseases.</p>
p. 89	<p>在 32°C 以上时锗粒子的作用更为活化。温度越高，锗粒子的效果越好。</p> <p>The properties of Germanium will be activated when temperature is above 32°C. The higher the temperature, the greater the effect.</p>
p. 90	<p>锗粒子发黑也不会改变效果。锗粒子可以半永久性的使用，效果不变。长时间使用或泡硫黄泉会泛黑，不过效果不变，可以利用湿纸巾等擦亮。</p> <p>The effect of Germanium will not be affected even If it turns black. Germanium's effects are long lasting and there will be no change on its effects. Long hours of use may cause it to turn black, but the effects are not affected, and you can polish it with a wet tissue.</p>

 <h2 style="text-align: center;">锗消除疼痛，引出自癒力！</h2> <h2 style="text-align: center;">锗消除疼痛，引出自癒力！</h2>	
15	<p>人体因为精密的电气系统而成立。</p> <p>The body consists of many electric systems.</p>
33	<p>人体藉着电气而活动，从基础代谢到肌肉运动，全部仰赖电子的活动而运作。很多化学教科书都有提到抗气化作用，与无机锗的构造相近。</p> <p>Body functions are a result of electrical systems, which sends signals to tell our body to move. A lot of scientist have mentioned how this affects breathing and taking in oxygen, but many have not mentioned about how Germanium helps.</p>



39	<p>锗是半导体，在 32°C 以上时就会通电。</p> <p>Germanium is a semiconductor, it will conduct electricity when temperatures are above 32°C.</p>
76	<p>锗拥有负离子所没有的作用。</p> <p>锗的作用和负离子是相通的。锗具有供应电子的力量，能够对抗正离子，所以负离子和锗具有相同的效果。</p> <p>锗不只供应电子，同时也具有负离子所欠缺的力量。即是能够藉着诱导体内的离子而得到调整电气的作用。</p> <p>Germanium have effects that negative ions don't.</p> <p>Germanium and negative ions have similar effects, as both can work against positive ions. But Germanium is able to maintain the ion balance in the body.</p>

	<h2>锗是神奇的「醫療礦物質」</h2> <h2>锗是神奇的「医疗矿物质」</h2>
71	<p>电流是电子的流动。电子的流动就能产生能源。生命也需要电子流动产生的能量。在发生能量时，电子一定会移动。</p> <p>Current is the flow of electrons. The flow of electrons will be able to produce energy. The body needs energy, and this can be produced through electron flow.</p>
95	<p>锗可以藉着取舍电子而调节生物电路。</p> <p>Germanium can help to release the excess positively charged ions out of the body.</p>
97	<p>外用锗的效果。</p> <p>The effects of wearable Germanium.</p>