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# Article 6. Van der Waals force and Dark Matter/范德华力与暗物质

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Dark matter is a kind of energy binder underlay in the fourth dimensional space that polymerizes atoms, molecules and the other micro-particles of three-dimension spaces, which makes these micro-particles form an aggregate like a necklace, and thus produces a kind of torsion force, which is called space-time torsion. This conforms to the torque theorem of materials in mechanics. Gravitation, Van der Waals force and inter-atomic force all conforms to the nature of space-time torsion. The stable materials assembly binding by dark matter produces a non-linear buffer force against the external destructive force, which is the principle of torque theorem. The adhesive force of dark matter meets the principle of fluid mechanics. In this article, the torque theorem of solid materials in mechanics is introduced as an example, which is more stable and less disturbance by the other external forces as compared to atmospheric and liquid materials. Because of the existence of dark matter, the conversion of energy between different natures (such as conversion between mechanical energy and magnetic energy) must be based on the calculations of four-dimensional space. The conversion theorem based only on the calculation of three-dimensional space can hardly stand.

The molecular structure is usually similar to the internal structure of the atom, which leads to internal neutralization and shield effect during the revolution motion, but it is weaker. The reason is that the binder of the fourth dimension dark matter makes the movement of elementary particles inside molecules more parallel to the fourth dimension axis, while the motion of particles inside atoms is more vertical relatively to the fourth dimension axis. This also makes the electric field effect by the cutting motion of the elementary particles in the molecules relatively to the magnetic line of fourth axis is weaker, compared with atoms. Consequently, the higher the binding force of dark matter, the less electric charges in the proton and electron, the more restricted motions of free electrons, and the less conductivity of the materials. Further more, in physical chemistry, the conductivity of single atom materials (such as metals) or single element crystals (such as graphite) is generally higher than that of multi-elements chemical compounds in common/normal conditions (not superconductivity condition), which is closely related to the adhesion properties of dark matter. Generally, the adhesive force required by single element polymer is less than that of multi-elements form polymer.Under the condition of high temperature, the internal/thermal energy of materials increases, and the movement that micro-particles collide with each other randomly accelerate, so the required adhesion force by the energy binder of dark matter increases. On the other hand, the closer to absolute zero temperature, the more slowly the micro particles collide with each other randomly, so that the weaker adhesion forces is required by dark matter energy binder. Therefore, superconductor conditions are formed at low temperature. It provides the inverse deduced/demonstrated methods through the data conclusion of molecules in three-dimensional space to extrapolate the adhesion of dark matter on the fourth dimension axis.

Due to the adhesion force of dark matter on the fourth dimensional axis, micro particle aggregates of stable form generate non-linear buffering resistance to external destructive forces, resulting in non-linear cutting stress on the surface of macro objects, which is called frictional resistance. The greater the adhesive force of dark matter, the higher the frictional resistance coefficient, and this logical relationship is reversible. Thus, the adhesion of dark matter can be measured according to the frictional resistance coefficient of specific substances. In another article, it has been discussed that material aging is caused by the decay of dark matter adhesion [2]. Therefore, material aging reduces the friction resistance coefficient, further supporting this logical relationship. Designing physical experiments: there are three different metal materials are selected to forge friction plates. One is iron, one is copper extracted from fresh ore materials, and the other is copper that has been used for a long time and is recycled. The three metal materials are manufactured into friction plates using the same forging process, and their respective friction resistance coefficients are measured. It is to assume that the forging process is the same so the surface roughness of different metal plates is also the same, and then the difference in friction resistance coefficient of metal plates made of different metal materials is the difference in adhesion forces of dark matter.

译文：暗物质为第四维度空间中，聚合原子、分子等三维空间微观粒子的能量粘合剂，使得这类粒子像串项链一样生成集合体，从而产生了一种扭力，称为时空扭力，在力学上符合材料的扭矩定理。万有引力、范德华力、原子间作用力都符合时空扭力的性质。稳定型的暗物质微观粒子集合体相对于外来作用破坏力产生非直线型缓冲对抗力，这就是扭矩定理的产生原理。暗物质的粘合力符合流体力学的定理；本文把固体材料中的扭矩定理作为例子，与气态、液态物质相比更为稳定，受到较少其它外力因素干扰。暗物质的存在，使得能量在不同性质间（比如机械能与磁场能之间）的转换必须建立在四维空间上，仅仅是三维空间中的转换定理是无法成立的。

分子结构通常也跟原子内部结构一样，在公转过程中有内部中性屏蔽作用，但是更为微弱一些。原因是第四维度暗物质的粘合剂使得分子内部微观粒子相对于第四维度轴的运动更加趋向于平行切线运动，而原子内部粒子相对于第四维度轴的运动是更加趋向于垂直运动。这也使得分子中的微观粒子相对于第四维度轴的磁力线所进行的切割运动产生的电场效应更弱一些。因此，暗物质的粘合力越高，质子和电子中的电荷量就越少，自由电子的运动就越受限，材料的导电性也就越低。进一步拓展，物理化学中单原子形态存在的物质（比如金属）或是单晶体（比如石墨）物质的导电性能在常态条件下（非超导条件）普遍高于多元素化学物质的导电性能，与暗物质的粘合力特性有很大关联。通常单元素物质形态聚合体所需要的粘合力小于多元素物质形态聚合体。物质在高温条件下，内能增加，微观粒子相互随机碰撞运动加剧，从而对暗物质能量粘合力增加。反之，越接近绝对零度，微观粒子相互随机碰撞运动减缓，从而对暗物质能量粘合力减弱。因此，

超导体条件都形成于低温条件。这正好可以从分子在三维空间的数据结论逆向反证出其在第四维度轴上暗物质的粘合力，提供了反证推算方法。

稳定形态的微观粒子集合体由于暗物质在第四维度轴上的粘合力，对外来作用破坏力产生非直线的缓冲抵抗力，因此在宏观物体的表面产生非直线性切割应力即为摩擦阻力。暗物质的粘合力越大，摩擦阻力系数更高，此逻辑关系可逆。从而可以根据特定物体摩擦阻力系数测定暗物质粘合力。另一篇文章中论述了材料衰老是由于暗物质粘合力衰减造成的[2]，因此材料衰老使得摩擦阻力系数减少，进一步佐证这一逻辑关系。设计物理实验：选择三种不同金属材料锻造成摩擦片，一种为铁、一种为新鲜矿石材料提炼的铜，另一种为使用年限久远并且回收利用的铜，三种金属材料用相同锻造工艺制造成摩擦片，分别测试各自的摩擦阻力系数。假设锻造工艺相同，不同金属片表面的粗糙度也相同，因此不同金属材料制造的金属片摩擦阻力系数的差异即为暗物质粘合力的不同。

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