



Breakthrough: Physicists Develop Time Quasicrystal Inside Diamond

Description

A new type of time crystal may be a big deal in science. Physicists used lasers on a diamond to make what they think is the first real time quasicrystal. This could help with quantum research and tech.

Time crystals are special because they have patterns that don't repeat like other materials. They move in a way that isn't controlled by outside forces. This could lead to new discoveries in physics.

To make a time crystal, scientists knocked some carbon atoms out of a diamond lattice, creating a nitrogen-vacancy center. By using microwave pulses, they were able to create a time quasicrystal with unique patterns that repeated for a short time.

This new phase of matter has many potential uses, like in measurement and quantum computing. It may take a while before we can use time crystals in everyday life, but it's an exciting step forward in science.

Vocabulary List:

1. **Quasicrystal** /'kwāzē,kris(t)l/ (noun): A structure that exhibits a form of order but does not repeat periodically unlike traditional crystals.
2. **Lattice** /'lætɪs/ (noun): A regular repeated arrangement of atoms in a material.
3. **Nitrogen-vacancy** /'naɪtrədʒən 'vækənsi/ (noun): A type of defect in a diamond crystal where a nitrogen atom replaces a carbon atom and creates a vacancy.
4. **Microwave** /'maɪ.krə.weɪv/ (noun): A form of electromagnetic radiation with wavelengths in the range of about one millimeter to thirty centimeters.
5. **Potential** /pə'tenʃəl/ (adjective): Having or showing the capacity to become something in the future.
6. **Discoveries** /dɪs'kʌv.ər.ɪz/ (noun): The act of finding or uncovering something that was previously unknown.

CATEGORY

1. Health - LEVEL2

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