New experiment could confirm the fifth state of matter in the universe

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"It doesn't contradict quantum mechanics, electrodynamics, thermodynamics or classical mechanics. All it does is complement physics with something new and incredibly exciting."

Dr. Vopson's previous research suggests that information is the fundamental building block of the universe and has physical mass.

He even claims that information could be the elusive dark matter that makes up almost a third of the universe.

He said: "If we assume that information is physical and has mass, and that elementary particles have a DNA of information about themselves, how can we prove it? My latest paper is about putting these theories to the test so they can be taken seriously by the scientific community."

Dr. Vopson's experiment proposes how to detect and measure the information in an elementary particle by using particle-antiparticle collision.

He said: "The information in an electron is 22 million times smaller than the mass of it, but we can measure the information content by erasing it."

"We know that when you collide a particle of matter with a particle of antimatter, they annihilate each other. And the information from the particle has to go somewhere when it's annihilated."

The annihilation process converts all the remaining mass of the particles into energy, typically gamma photons. Any particles containing information are converted into low-energy infrared photons.

In the study Dr. Vopson predicts the exact energy of the infrared photons resulting from erasing the information.

Dr. Vopson believes his work could demonstrate that information is a key component of everything in
the universe and a new field of physics research could emerge.

**More information:** Melvin M. Vopson,

Provided by University of Portsmouth

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