

BROWNIAN MOTION

Brownian motion is the random, zigzag movement of particles suspended in a fluid. This jiggling is caused by the constant, random collisions of the visible particles with the much smaller, invisible molecules of the surrounding medium. It is a direct observation of the random kinetic energy of atoms and molecules. famously first observed by botanist Robert Brown with pollen grains in water.

* Random movement →

It is the erratic unpredictable path of microscopic and larger particles.

Result of collisions →

The motion is not self-generated but is the result of the

visible particles being constantly bombarded from all sides by invisible molecules of the fluid.

* Direct evidence for atoms →

The phenomenon provided strong evidence for the existence of atoms and molecules, as it showed that these invisible particles were in constant motion and colliding with larger ones, a key concept explained by scientists like Albert Einstein.

Example →

Pollen in water →

Botanist Robert Brown first observed this motion while looking at pollen grains suspended in water under a microscope, noting their random jiggling.