World Academy of Science, Engineering and Technology
International Journal of Physical and Mathematical Sciences
Vol:17, No:08, 2023

Magnetic Lines of Force and Diamagnetism

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Abstract : Magnet attraction or repulsion is not a product of a strange force from afar but comes from anchored lines of force inside the magnet as if it were reinforced concrete since you can move a small block by taking the steel rods that protrude from its interior. This approach serves as a basis for studying the behavior of diamagnetic materials. The significance of this study is to unify all diamagnetic phenomena: Movement of grapes, cooper approaching a magnet, Magnet levitation, etc., with a single explanation for all these phenomena. The method followed has consisted of observation of hundreds of diamagnetism experiments (in copper, aluminum, grapes, tomatoes, and bismuth), including the creation of own and new experiments and application of logical deduction product of these observations. Approaching a magnet to a hanging grape, Diamagnetism seems to consist not only of a slight repulsion but also of a slight attraction at a small distance. Replacing the grapes with a copper sphere, it behaves like the grape, pushing and pulling a nearby magnet. Diamagnetism could be redefined in the following way: There are materials that don't magnetize their internal structure when approaching a magnet, as ferromagnetic materials do. But they do allow magnetic lines of force to run through its interior, enhancing them without creating their own lines of force. Magnet levitates on superconducting ceramics because magnet gives lines near poles a force superior to what a superconductor can enhance these lines. Little further from the magnet, enhancing of lines by the superconductor is greater than the strength provided by the magnet due to the distance from the magnet's pole. It is this point that defines the magnet's levitation band. The anchoring effect of lines is what ultimately keeps the magnet and superconductor at a certain distance. The magnet seeks to levitate the area in which magnetic lines are stronger near de magnet's poles. Pouring ferrofluid into a magnet, lines of force are observed coming out of the poles. On other occasions, diamagnetic materials simply enhance the lines they receive without moving their position since their own weight is greater than the strength of the enhanced lines. (This is the case with grapes and copper). Magnet and diamagnetic materials look for a place where the lines of force are most enhanced, and this is at a small distance. Once the ideal distance is established, they tend to keep it by pushing or pulling on each other. At a certain distance from the magnet: the power exerted by diamagnetic materials is greater than the force of lines in the vicinity of the magnet's poles. All Diamagnetism phenomena: copper, aluminum, grapes, tomatoes, bismuth levitation, and magnet levitation on superconducting ceramics can now be explained with the support of magnetic lines of force.

Keywords : diamagnetism, magnetic levitation, magnetic lines of force, enhancing magnetic lines
Conference Title : ICCMPDP 2023 : International Conference on Condensed Matter Physics, Diamagnetism and Paramagnetism
Conference Location : Barcelona, Spain
Conference Dates : August 10-11, 2023