

Magnetic accelerator

This demonstration shows that energy is released as bonds are formed or as magnetic balls collide. When the non-magnetic balls are collided it shows the normal kinetic energy expectations that the energy in is lowered by friction and the balls will come to rest on the ramp. When the magnetic ball is drop the magnetic attraction adds energy to the system the same way that a bond forming. The magnetic attraction of the sphere is similar to the ionic attractions in a compound. This increased attraction then leads to a much more dramatic effect highlighting that energy is released by a bond forming in a compound. This does not mean that all systems release energy overall but it is often overlooked that a bond forming will always release energy (more to a lower energy state) as compared to the system before the bond formation.