

# Electro static force

## Contact forces

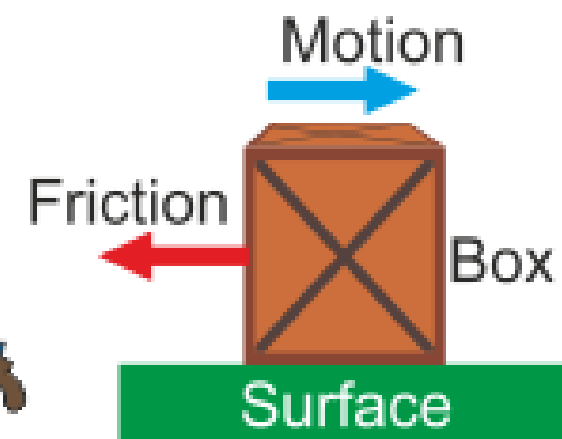
Forces experienced by bodies when they are in **physical contact** with each other.

### Muscular



Force due to the action of muscles.

### Frictional

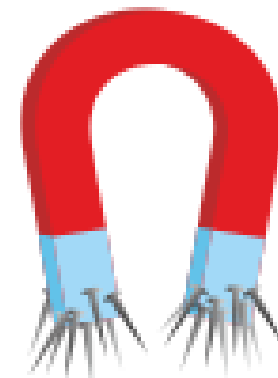


Force acting opposite to the direction of motion.

## Non -Contact forces

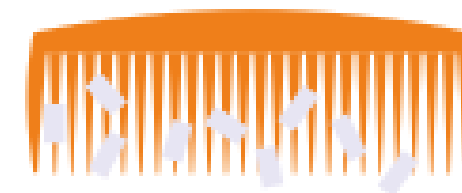
Forces experienced by bodies even if they are **not in physical contact** with each other.

### Magnetic



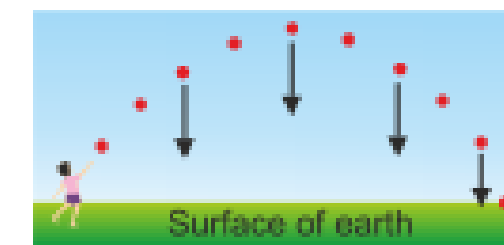
Force exerted by a magnet.

### Electrostatic



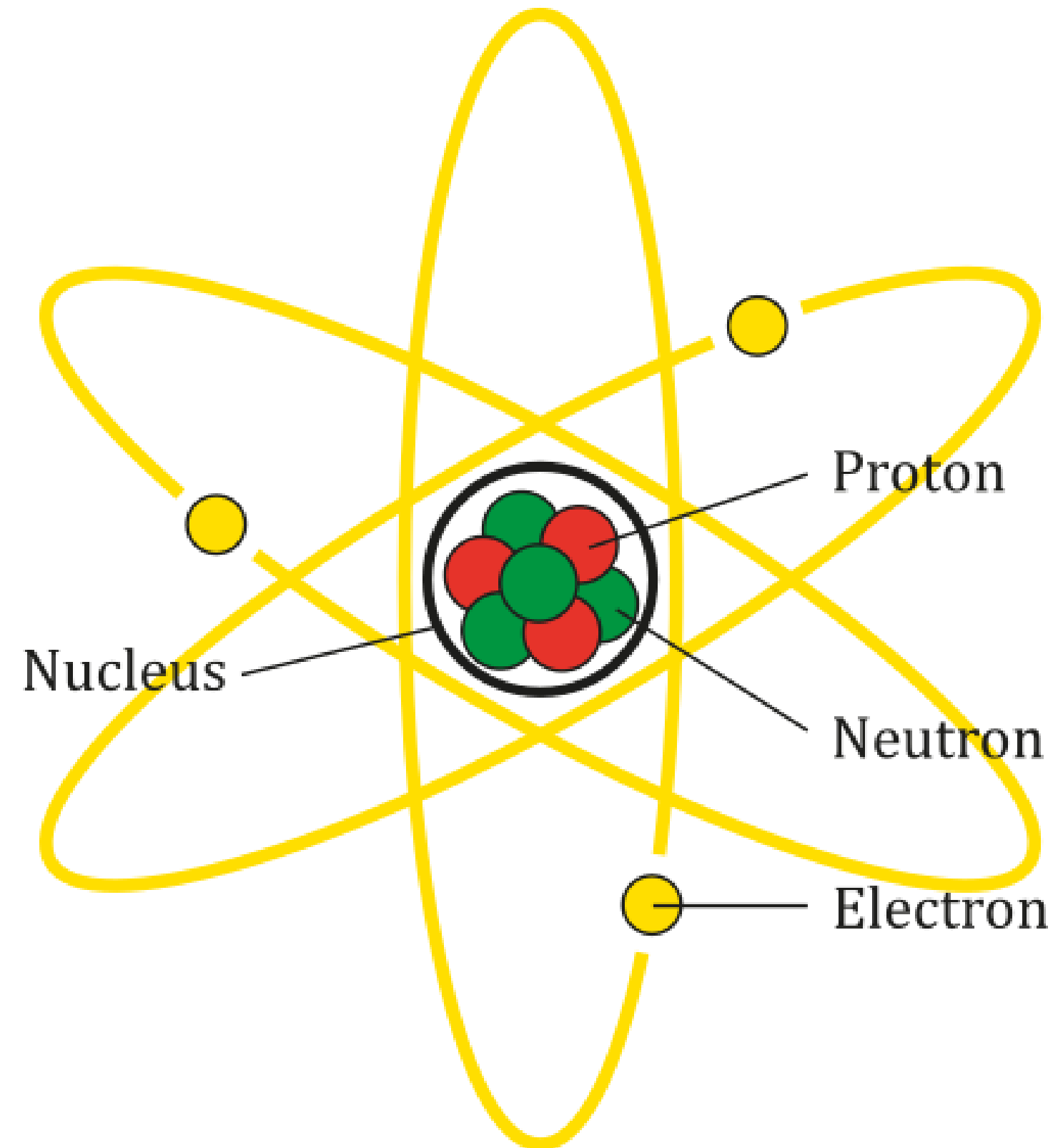
Force exerted by a charged body on another charged body.

### Gravitational



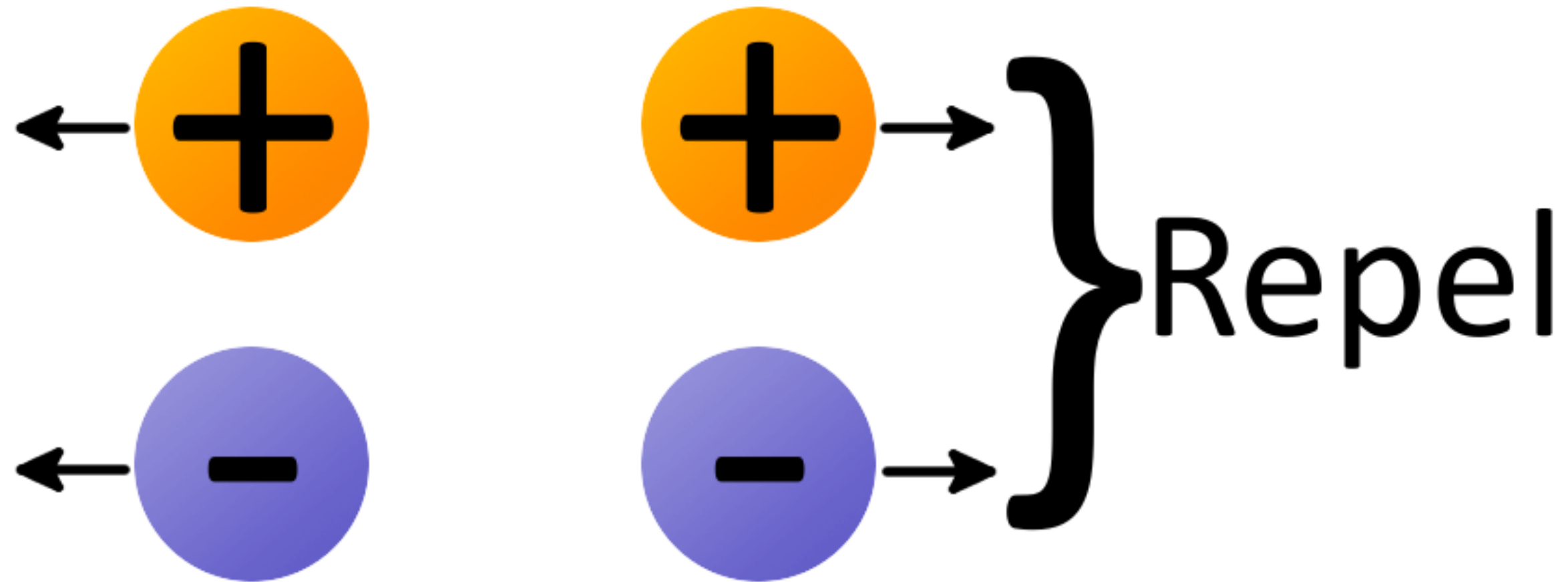
Attractive force exerting between two objects.

# An Atom



# Electrostatic Forces

- Atoms:
  - protons ( $p^+$ ) bound in nucleus
  - electrons ( $e^-$ ) freer to move about
- $e^-$  and  $p^+$  have equal amounts but opposite charge
- When objects rub together, electrons may be exchanged
  - Objects that have more  $e^-$  than  $p^+$  are negative
  - Objects with fewer  $e^-$  than  $p^+$  are positive
- Charge can not be created or destroyed, only transferred.

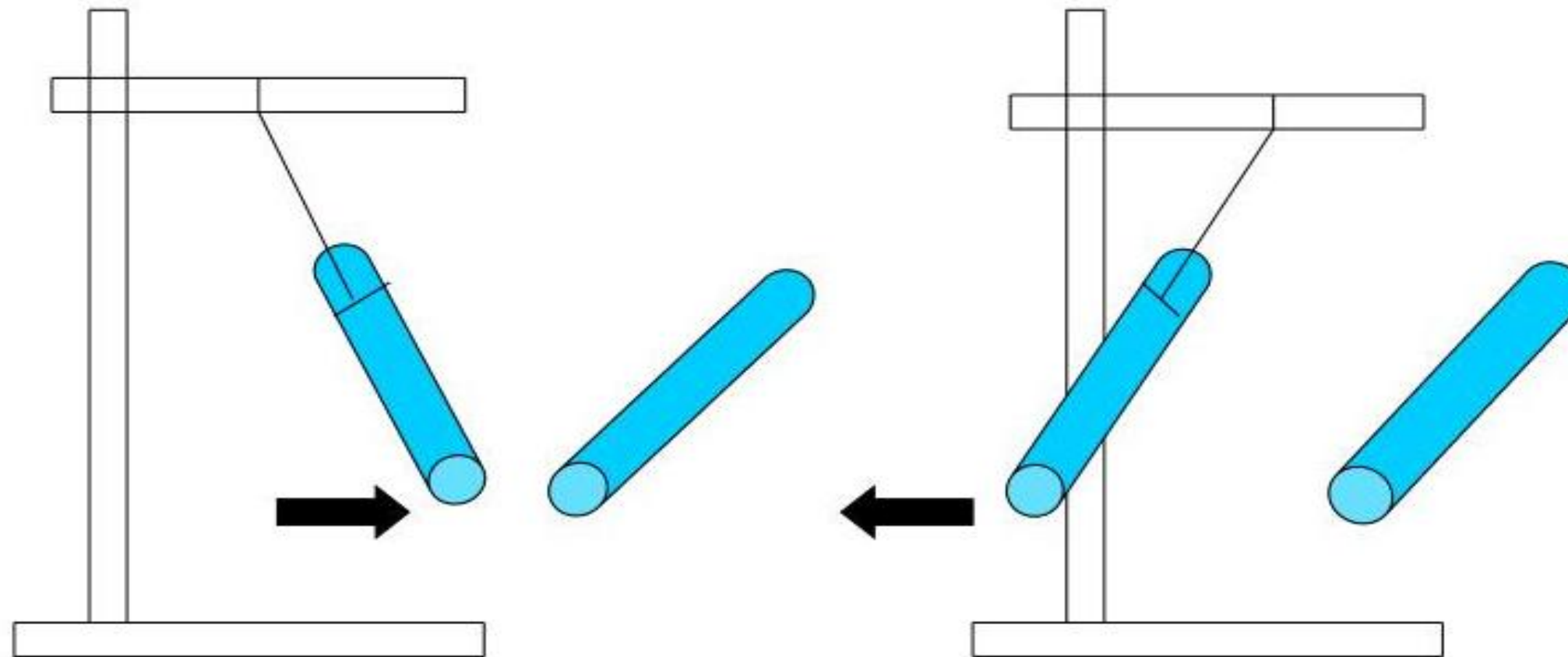


# Electrostatic force

**Electrostatic force is the force exerted by a charged body on another charged or uncharged body.**

**Eg :- A plastic straw charged by rubbing with paper attracts a suspended plastic straw.**

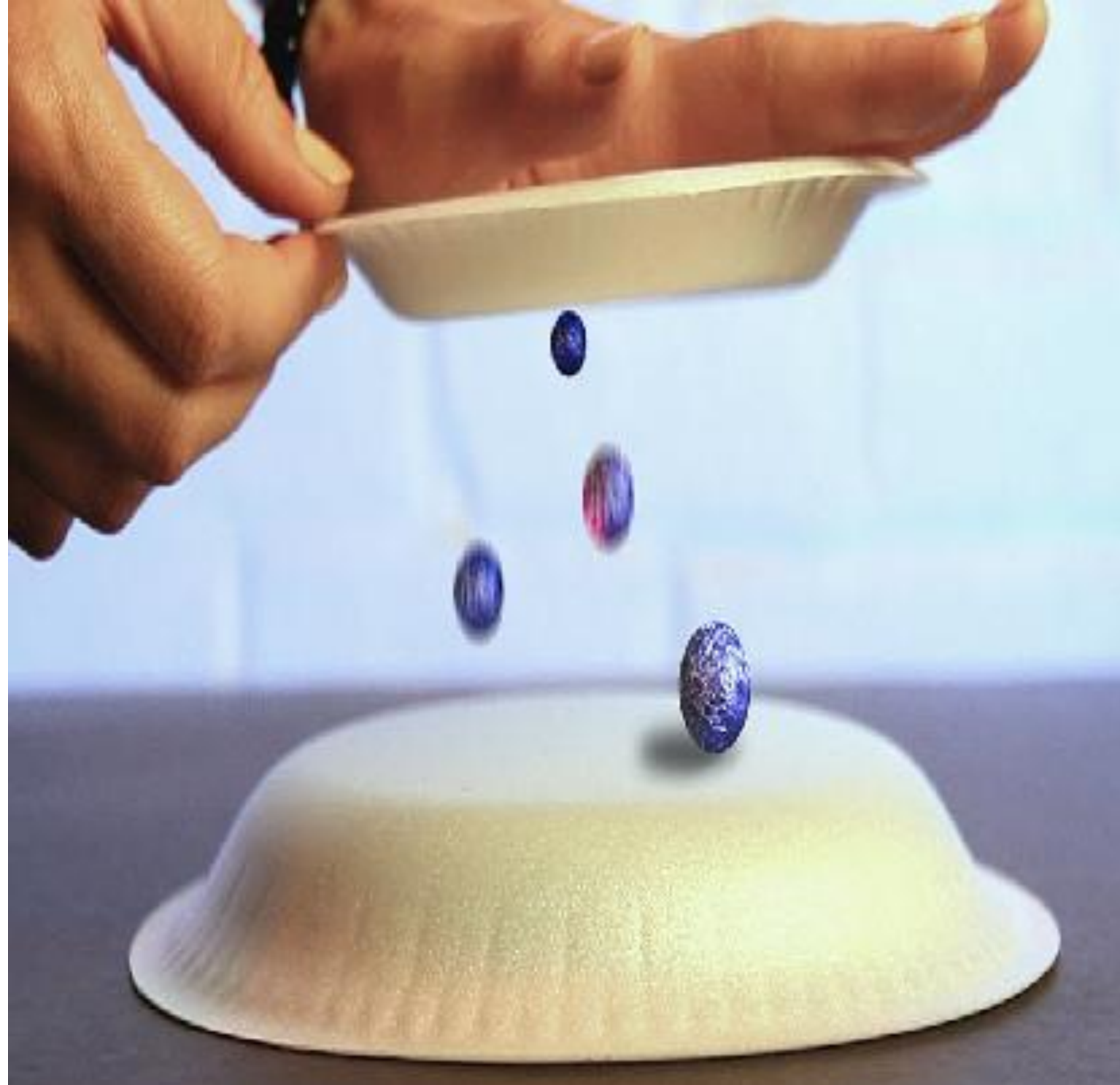
**A plastic straw charged by rubbing with paper repels a suspended plastic charged by rubbing with paper.**











# Electro positivity