

# Introductory Physics for Scientists and Engineers (II) PHY2049

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Book: University Physics (Vol 2), Young and Freedman, 12<sup>th</sup> ed.

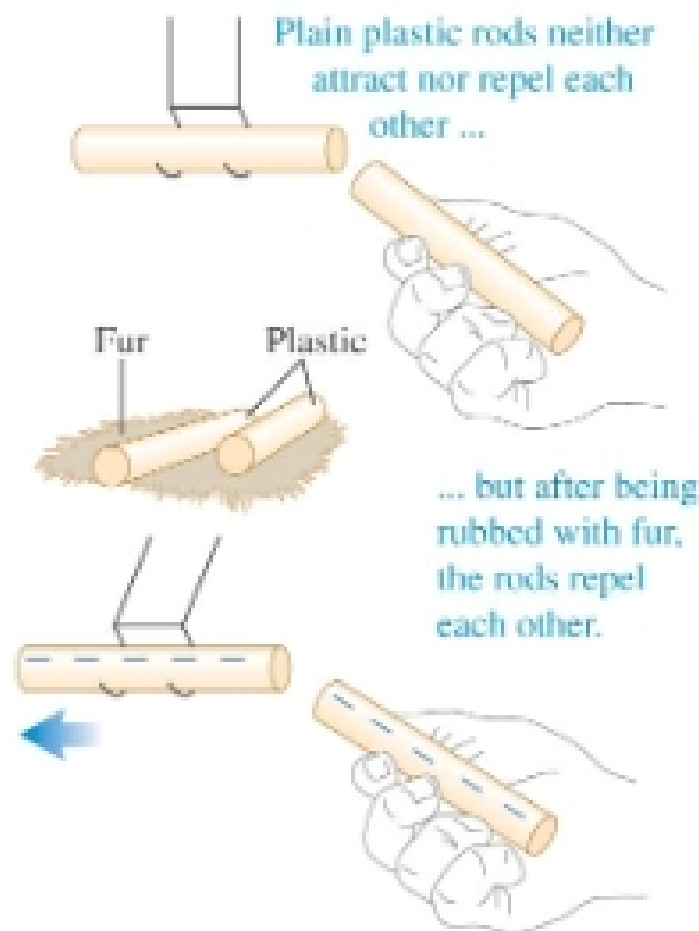
## Chapter 21 – Electric Charge and Electric Field

- Electric Charge
- Conductors, Insulators and Induced Charges
- Coulomb's Law
- Electric Field and Electric Forces
- Electric Field Calculations
- Electric Field Lines
- Electric Dipoles

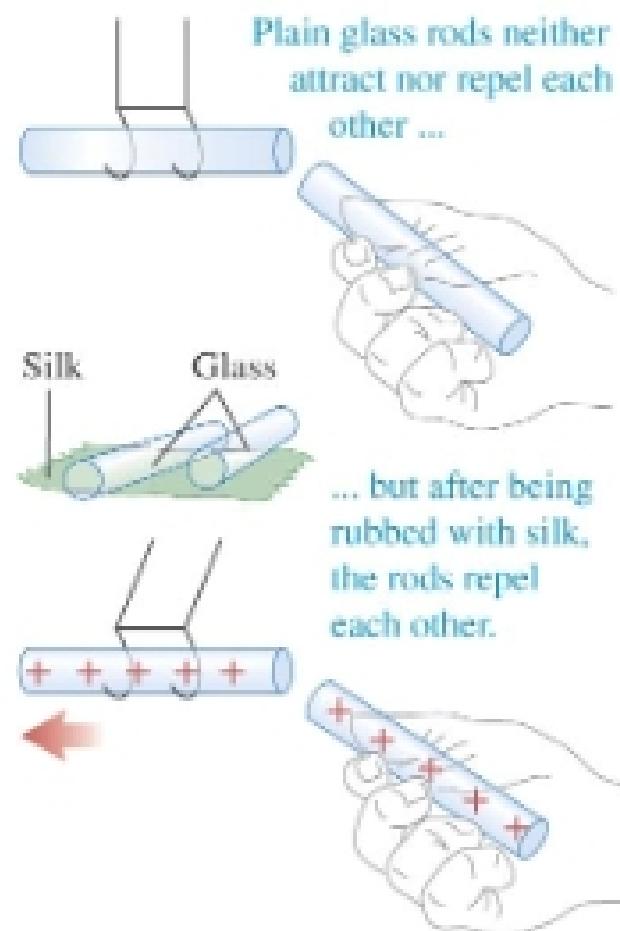
# 1. Electric Charge

Electrostatics: interaction between electric charges that are at rest.

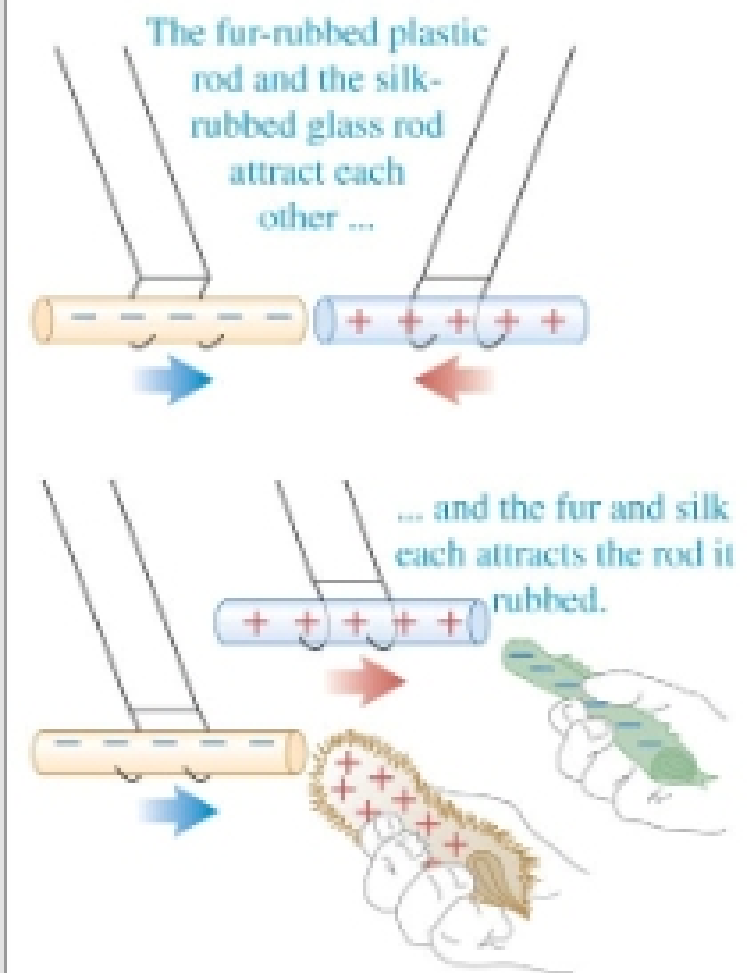
(a) Interaction between plastic rods rubbed on fur



(b) Interaction between glass rods rubbed on silk



(c) Interaction between objects with opposite charges



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Two + charges and two – charges repel each other.

+ charge and – charge attract each other.