

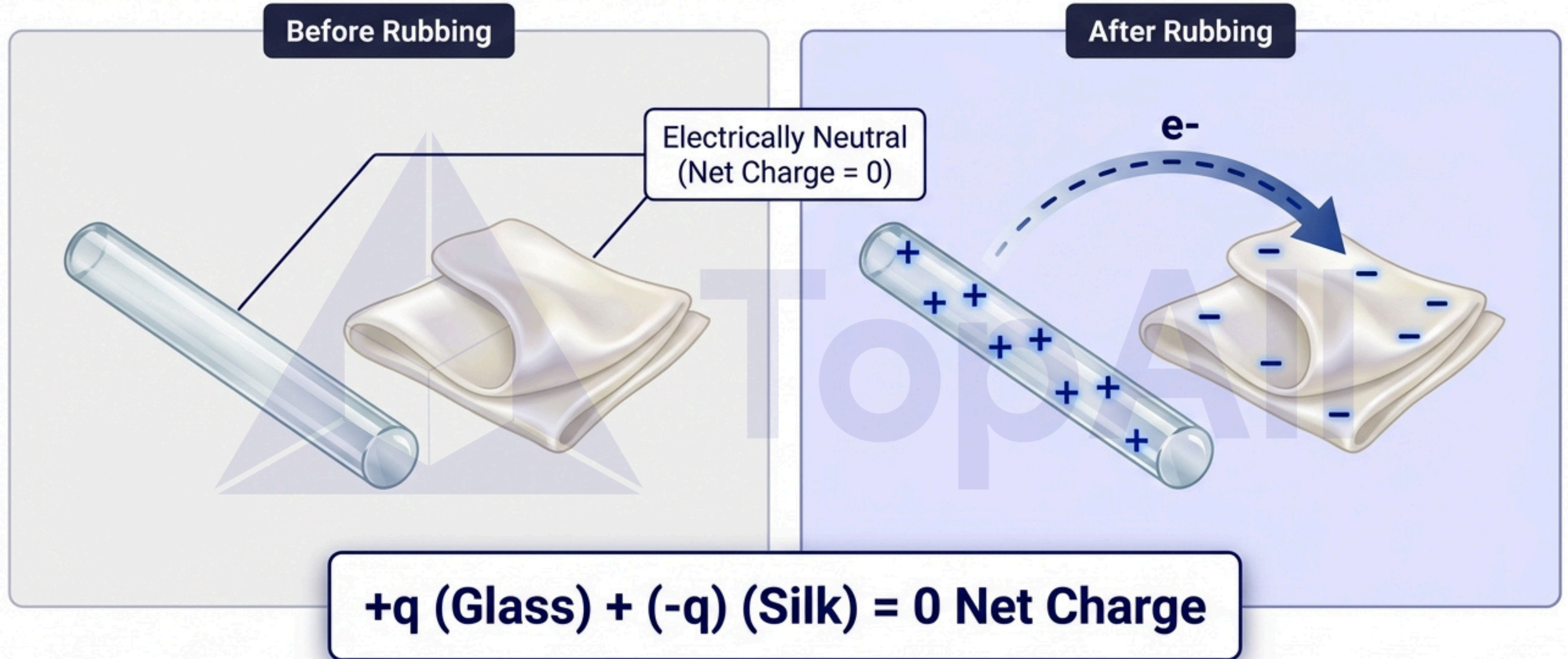


$$\sum Q_{initial} = \sum Q_{final}$$

Charge is Conserved

Transfer, redistribution, and the fundamental law of net charge in isolated systems.

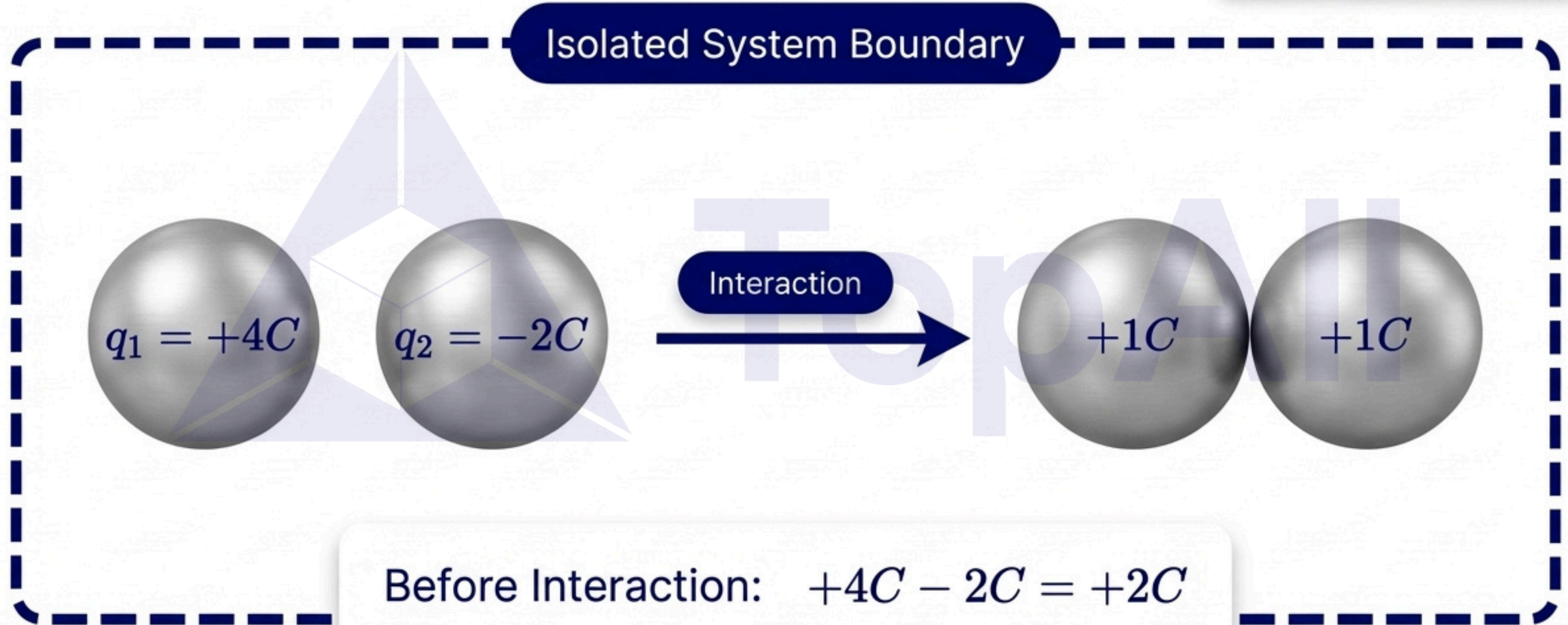
Friction Causes Transfer, Not Creation



When we rub two bodies, what one body gains in charge, the other body loses. No new charges are ever created.

Redistribution in Isolated Systems

Total charge remains constant regardless of internal interactions.



Before Interaction: $+4C - 2C = +2C$

After Interaction: $+1C + 1C = +2C$



You've Learned the Theory. Let's Test Them Now.

$$E=mc^2$$



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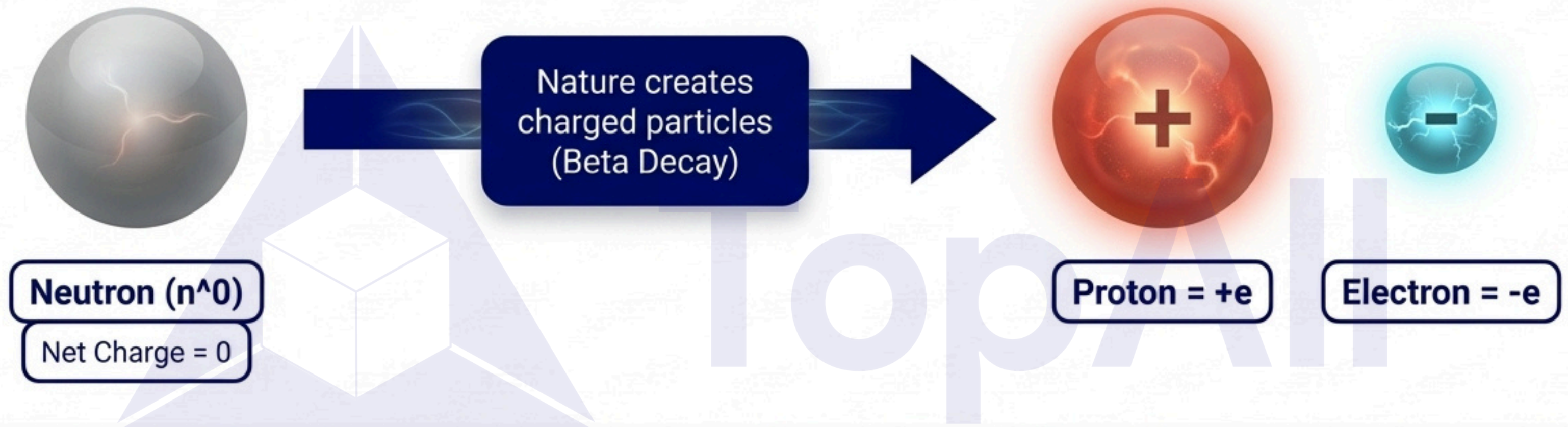
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Key Highlights

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- » Practice Unlimited MCQs for NEET & JEE
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Conservation at the Subatomic Scale



$$(+e) + (-e) = 0 \text{ Net Charge}$$

Even when charge-carrying particles are created or destroyed in nature, the net charge of the system remains identical.

Module Summary & Check Your Understanding

- ✓ The total net charge of an isolated system is always conserved.
- ✓ Macroscopic charging (friction) is merely a transfer of electrons.
- ✓ Net charge cannot be created or destroyed.

⚠ The Particle Count Trap

Examiners will try to trick you! It IS possible to create or destroy charge-carrying particles (neutron turning into a proton and electron). The law states that NET CHARGE is conserved, NOT the total number of charged particles!



You've Learned the Theory.

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