

18.7: Thinking about the material

18.7.1: Reflect and research

1. Explain how the capacitance can increase when a dielectric material is used.
2. Explain how a corona ring works.
3. Which shapes of electrodes are most common? Why?

18.7.2: To try at home

1. Try to release a static discharge from your finger to some metal object. Measure the distance between your finger and the metal object at the time of the discharge. Knowing the breakdown voltage of air, what was the potential difference between your finger and the metal object just before the discharge?

18.7.3: To try in the lab

1. Propose an experiment to measure the point at which various substances experience electric breakdown.
2. Propose an experiment to measure the vacuum permittivity constant (ϵ_0).

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