Grounding and Shielding

Grounding

Question 1 *The four equations below show the tangential and normal electric field at the boundary of two dielectrics. Dielectric 1 is a Teflon with a relative dielectric constant of 2.2, and dielectric 2 is Silicon with a relative dielectric constant of 11.2. Which set of equations represents a possible electric field?*

Multiple Choice:

(a) $2.2\,E_{1t} = 11.2\,E_{2t}$ *and* $E_{1n} = E_{2n}$

(b) $E_{1t} = E_{2t}$ *and* $2.2\,E_{1n} = 11.2\,E_{2n}$ ✓

(c) $2.2\,E_{1t} = 11.2\,E_{2t}$ *and* $E_{1n} = E_{2n}$

(d) $E_{1t} = E_{2t}$ *and* $11.2\,E_{1n} = 2.2\,E_{2n}$

Shielding

Learning outcomes: Students will
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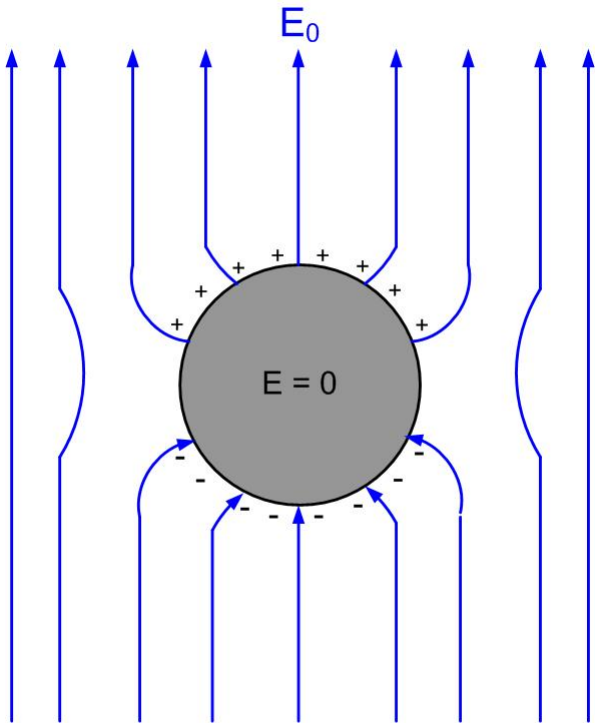

Figure 1: Metallic sphere in an external electric field.