

CHAPTER OVERVIEW

3: Dipoles and Dielectrics

In contrast to conductors, the motion of charges in dielectrics is restricted to the atom/molecule interiors, so that the electric polarization of these materials by an external field takes a different form. This issue is the main subject of this chapter, but in preparation for its analysis, we have to start with a general discussion of the electric field induced by a spatially-restricted system of charges.

[3.1: Electric Dipole](#)

[3.2: Dipole Media](#)

[3.3: Polarization of Dielectrics](#)

[3.4: Electrostatics of Linear Dielectrics](#)

[3.5: Electric Field Energy in a Dielectric](#)

[3.6: Exercise Problems](#)

Thumbnail: The electric field lines and equipotential lines for field of two point charges. (CC BY-SA 3.0; [Geek3](#) via [Wikipedia](#)).

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