

## Magnetic Materials

Dia-, Para-, and Ferromagnetism - Curie Temperature

## Electromagnets

## Bohr Magneton - Hysteresis

## Transformers

impedance matching

## RC and RL circuits - AC and DC

car coils - Ruhmkorff

## LRC circuits - Dissipated Power - Resonance

resonance width - metal detectors

impedance - reactance - tuning of radio

## EM Waves - Traveling and Standing Waves

string and wind instruments

resonance frequencies

distance determinations using radar and laser pulses

carrier wave - amplitude modulation

## Poynting Vector

## Radiation Pressure

comet tails

## Polarization of EM Radiation

linear, elliptical and circular

## Snell's Law

refraction - total reflection - fiber optics

## Index of Refraction

speed of light

## Dispersion - Prisms

## Huygen's Principle

## Illusion of Colors

primary colors - color triangle - Benham top

Edwin Land's famous color experiment